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Are Posttraumatic Stress Symptoms Related to Mental Health Service Use?

A Prospective Study of Danish Soldiers Deployed to Afghanistan

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ABSTRACT

Background: Investigating the use of mental health services by combat veterans can help illuminate utilization and unmet needs of this population. The aims of this study were to estimate the use of mental health services and to examine how such use is associated with self-reported symptoms of posttraumatic stress disorder (PTSD) in soldiers before and after deployment to Afghanistan.

Methods: Prospectively, 703 Danish soldiers who deployed from January 2009 to August 2009 were followed up with 6 assessments from predeployment to 2.5 years postdeployment in 2012. At assessments, the soldiers responded to a comprehensive questionnaire including a measure of PTSD symptoms (the PTSD Checklist-Civilian version). These self-reported data were combined with individual-level records of receiving psychotherapy from the Military Psychological Division at the Danish Defense and psychiatric treatment from the Danish registers.

Results: The prevalence of PTSD symptoms increased over time, and almost 10% of the sample reported high levels of PTSD symptoms 2.5 years postdeployment. Overall, 37% of the soldiers utilized mental health services; 6% utilized psychiatric services, and 12.4% redeemed a prescription for psychiatric medicine. Approximately one-third received psychotherapy at the Military Psychological Division. In those reporting high PTSD symptomatology, 83% utilized 1 or more types of mental health service. At predeployment and homecoming, high PTSD symptomatology was significantly ($P < .01$) associated with attending psychotherapy, but not with psychiatric treatment or redemption of psychiatric medicine.

Conclusions: With time, more soldiers report high PTSD symptoms. Among Danish soldiers with high symptomatology, the utilization of mental health services was high. Most frequently, soldiers with high PTSD symptomatology received psychotherapy at the Military Psychological Division and less frequently received psychiatric treatment.

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Veterans returning from armed conflict have an increased risk of experiencing symptoms of posttraumatic stress disorder (PTSD) and other psychiatric conditions.[1,2] Studies[3–5] have shown that many soldiers do not receive professional help for their mental health problems. The use of mental health services in this population can serve as a proxy for mental health problems, and data of self-reported psychiatric symptoms, when available, can illuminate the proportion of untreated soldiers who would quite likely benefit from treatment. If many soldiers report high levels of psychiatric symptoms but do not receive mental health services, changes should be implemented within the mental health service system to reach out to soldiers in need. Therefore, gaining insight on usage of mental health services by soldiers with mental health problems is important to adequately determine the need for mental health care of returning veterans and ultimately aid in the distribution of mental health care resources and efforts.

The use of mental health services in the aftermath of deployment and how such use is associated with self-reported PTSD symptoms have been examined. However, many previous studies[6–8] of soldiers' use of mental health services have sampled from Veterans Affairs populations and therefore include only veterans who have actively sought treatment for their mental health problems. Further, most studies[4,9–12] have relied exclusively on self-report data on the use of mental health services without linking these data to databases monitoring actual mental health service use. Such studies[4,9–12] might entail low response rates, which can bias the reported estimates of use of mental health services if the participating population is not representative. Additionally, a few large-scale US studies[12–14] have been based on data from the Post-Deployment Health Assessment, which is a nonanonymous, mandatory self-report screening of mental health problems applied by military health professionals at homecoming combined with electronic medical surveillance systems. Lack of anonymity or confidentiality might entail underreporting of symptoms[15–17] due to the soldiers' fear of stigmatization or negative influences on their military career.[15,18,19] Finally, most studies have assessed psychiatric service use only during the first year after homecoming, hence providing no knowledge on long-term service utilization. Long-term follow-up of mental health service use is especially important when the study population consists of deployed soldiers as delayed PTSD reactions (PTSD onset 6 months after traumatic event) are more common in this population.[20–22] In conclusion, no studies have combined confidentially collected self-reported PTSD symptoms with register-based long-term follow-up data on the use of mental health services.

To overcome some of the above-mentioned methodological issues, we combine data on the use of mental health services from the rich Danish national registers with confidentially self-reported data from a

Clinical Points

- The prevalence of posttraumatic stress disorder (PTSD) symptoms in soldiers increased over time after deployment, and almost 10% reported high PTSD symptoms 2.5 years postdeployment.
- Overall, 37% of veterans utilized mental health services after deployment.
- Previous studies have shown that many soldiers do not receive professional help for their mental health problems. In this Danish sample, we found that 83% of veterans with high PTSD symptomatology utilized 1 or more types of professional mental health service, in most cases psychotherapy.

longitudinal study (the USPER study[23–25]) of Danish soldiers deployed to Afghanistan. Our overall aims are to examine symptoms of PTSD in deployed soldiers, utilization of mental health services by soldiers, and the proportion of soldiers with high PTSD symptomatology who utilize mental health services. Furthermore, since data on the entire USPER cohort can be obtained from the registers, this study also offers the rare opportunity to compare mental health service use in USPER responders versus nonresponders. Such a comparison can illuminate whether the use of mental health services is higher in nonresponders and thereby reveal potential biases in the self-report of mental health service utilization.

METHODS

The USPER study is a prospective, longitudinal cohort study of the entire group of Danish soldiers deployed to Afghanistan with the International Security Assistance Force (ISAF) to participate in Operation Enduring Freedom (OEF) from January 2009 to August 2009. The soldiers were assessed on 6 occasions: 5–6 weeks before deployment, 2–5 months into the deployment, 1–3 weeks after homecoming, as well as 3 months, 7 months, and 2.5 years after deployment (see Figure 1 for response rates at each assessment). All in all, 743 soldiers were trained to deploy and therefore invited to participate in the predeployment assessment, but eventually 40 of these did not deploy, leaving a study cohort of 703 soldiers.

At all assessments, the soldiers completed a comprehensive questionnaire including validated measures of sociodemographics and various mental health issues. Participation was voluntary, and all data were treated with confidentiality. Data were anonymized and, importantly, self-reported data were available only to researchers, and by no means made available to the soldiers' superiors, mental health professionals, or colleagues within the military.

The PTSD Checklist-Civilian version (PCL-C)[26] was used to assess PTSD symptoms. The PCL-C consists of 17 items corresponding to *DSM-IV* PTSD symptoms, and each item is scored from 1 (not at all) to 5 (extremely). From these item scores, a total score ranging from 17 to 85 is computed. Individuals with PCL-C scores below 30 were considered low symptomatic, scores between 30 and 43 were considered moderate symptomatic, and scores above 43 were considered high symptomatic. Importantly, a score of 44 or above has been found in this sample to have acceptable diagnostic accuracy with a sensitivity of 0.72 and specificity of 0.96[27] when compared to diagnosis derived by the Structured Clinical Interview for *DSM-IV-TR* Axis I Disorders, Research Version, Patient Edition (SCID-I/P).[28]

PTSD diagnosis was established in this study from SCID-I/P interviews conducted at the 2.5-year assessment (N = 423).

From Statistics Denmark, a government institution, we retrieved individual-level data from the Danish Psychiatric Central Research Register,[29] the Danish National Prescription Registry,[30] and the Danish Register of Causes of Death[31] from the period 2009 through 2012. Register-based data were merged with the USPER data set by means of the unique civil registration number assigned to all individuals living in Denmark.[32] The Psychiatric Register covers all psychiatric facilities in Denmark and contains information on all psychiatric admissions, outpatient treatments, and emergency visits (from now on referred to as *psychiatric service use*). All psychiatric hospitals in Denmark are public, and psychiatric treatment is free of charge. The National Prescription Registry contains information about all medical prescriptions. We extracted information on prescriptions with Anatomic Therapeutic Chemical (ATC) Classification System codes N05A-C (antipsychotics and anxiolytics) and N06A-C (antidepressants and psychostimulants). All death certificates issued in Denmark are registered in the Danish Register of Causes of Death.

Finally, we gathered individual-level information on psychotherapy received after homecoming from the Military Psychological Division at the Veteran Center within the Danish Defense. Receiving psychotherapy was defined as having more than 1 consultation with a military psychologist, ie, indicating that a treatment had started after the first visit in which initial clinical assessment occurs.

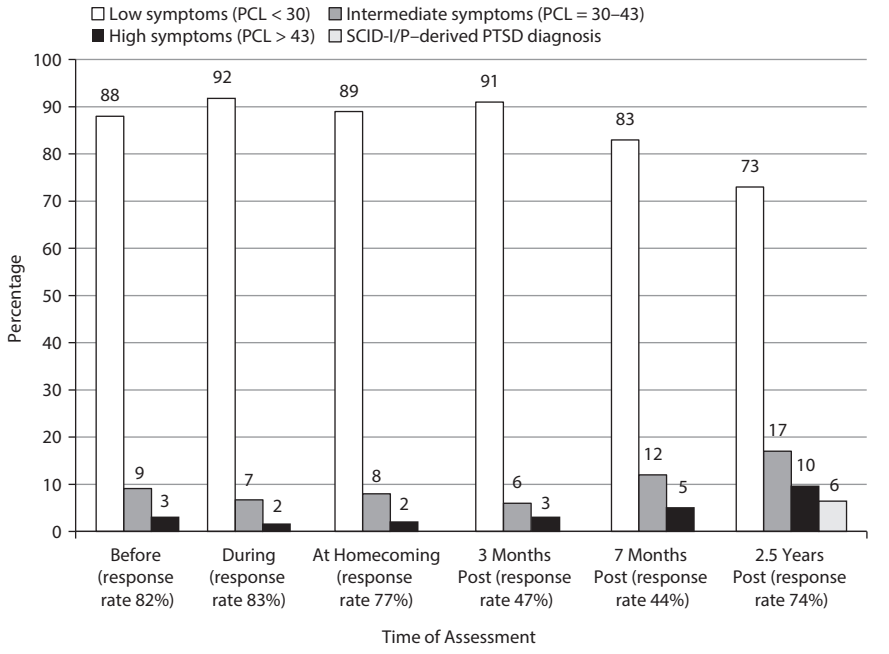
This study and the merged data from different sources were approved by The Danish Data Protection Agency (Copenhagen, Denmark; journal number 2012-54-0018), and all soldiers gave informed consent to participate in the USPER study.

With simple point prevalence estimations, we explored how self-reported PTSD symptoms developed from predeployment to 2.5 years postdeployment. Further, we used χ^2 test to examine how PTSD symptom level measured at predeployment, homecoming, 7 months, and 2.5 years postdeployment, as well as how PTSD diagnosis was associated with use of mental health services. Finally, again using χ^2 test, we established whether USPER nonresponders had a significantly biased use of mental health services compared with USPER responders.

RESULTS

The sample consisted of 93.9% men and 6.1% women, with a mean age of 27 years. Approximately 41% of the deployed

Figure 1. Prevalence of PTSD Symptoms From Predeployment Until 2.5 Years Postdeployment



Abbreviations: PCL-C = PTSD Checklist-Civilian version, PTSD = posttraumatic stress disorder, SCID-I/P = Structured Clinical Interview for *DSM-IV-TR* Axis I Disorders, Research Version, Patient Edition.

served as combat soldiers. The mean deployment time was 186.93 days (median = 192 days with an interquartile range of 186 [Q25%]–197 [Q75%]. During the course of the study, 6 participants died (3 in combat and 3 after homecoming). Figure 1 shows the prevalence of low, moderate, and high PTSD symptom levels across assessments. The prevalence of high-level PTSD symptoms increased over time; 5% of soldiers reported high symptoms at the 7-month assessment and 10% at the 2.5-year assessment. The prevalence of SCID-I/P–derived PTSD diagnosis at 2.5 years was 6% (see Figure 1).

Table 1 shows the use of mental health services after deployment from January 2009 through 2012. Across the study period, 37% of the sample utilized 1 or more types of mental health service. Forty-two (6.0%) of the deployed received psychiatric treatment; all together, they had 6 hospital admissions, 38 outpatient treatments, and 7 psychiatric emergency contacts. Prescriptions of psychiatric medicine were redeemed by 87 participants (12.4%) during the follow-up period: 59 prescriptions of antidepressants, 34 of hypnotics and sedatives, and 9 of anxiolytics, with some overlap. The Military Psychological Division performed a clinical psychological assessment on 40.2% of the sample, and, subsequently, 34.4% received psychotherapy after the initial assessment.

Overlap between different types of mental health services was high; thus, 88% of those utilizing psychiatric services and 74% of those redeeming psychiatric medicine also received psychotherapy.

Across the 4 assessments (predeployment, homecoming, 7 months after deployment, and 2.5 years after deployment), the proportion of soldiers using psychiatric services who had high PTSD symptomatology ranged from 0% to 32.0% versus a range of 3.7% to 6.1% for those with low PTSD symptomatology (Table 2). This utilization rate was significant only for the high PTSD group at the last assessment. The proportion having redeemed a prescription of psychiatric medicine was, in general, more

Table 1. Prevalence of Use of Mental Health Services

Variable	N (%)
Psychiatric service use	
Treatments/visits	
No treatment	661
Admissions	6
Outpatient treatments	38
Psychiatric ER visits	7
Persons[a]	
No. receiving any psychiatric service	42 (6.0)
Psychiatric medicine redeemed	
Prescriptions	
Antipsychotics	0
Anxiolytics	9
Hypnotics and sedatives	34
Antidepressants	59
Psychostimulants (ADHD)	0
Psycholeptics	0
Persons[a]	
No. receiving any psychiatric medicine	87 (12.4)
Military Psychological Division	
Persons[b]	
Visitations/assessment	278 (40.2)
Received psychological treatment	238 (34.4)

[a]Information on 703 participants.
[b]Information on 691 participants, ie, 14 missing.
Abbreviations: ADHD = attention-deficit/hyperactivity disorder, ER = emergency room.

Table 2. Self-Reported PTSD Symptoms, SCID-I/P Diagnosis, and Use of Psychiatric Services, Psychiatric Medicine, and Psychological Treatment Within the Military

		Psychiatric Service Use			Psychiatric Medicine			Military Psychological Treatment		
Time of Assessment		No (%)	Yes (%)	*P* Value	No (%)	Yes (%)	*P* Value	No (%)	Yes (%)	*P* Value
PCL > 43										
5–6 wks before deployment (baseline)	No	522 (93.9)	34 (6.1)	.62[b]	493 (88.7)	63 (11.3)	.43[b]	369 (66.4)	187 (33.6)	.0003[a]
	Yes	17 (100)	0 (0.0)		14 (82.3)	3 (17.7)		4 (23.5)	13 (76.5)	
At homecoming	No	502 (95.1)	26 (4.9)	1.00[b]	469 (88.8)	59 (11.2)	1.00[b]	368 (69.7)	160 (30.3)	.0022[b]
	Yes	13 (100)	0 (0.0)		12 (92.3)	1 (7.7)		4 (30.8)	9 (69.2)	
After 7 mo	No	283 (96.3)	11 (3.7)	.13[b]	270 (91.8)	24 (8.2)	.03[b]	211 (71.8)	83 (28.2)	<.0001[b]
	Yes	13 (86.7)	2 (13.3)		11 (73.3)	4 (26.7)		3 (20.0)	12 (80.0)	
2.5 y postdeployment	No	458 (96.8)	15 (3.2)	<.0001[b]	440 (93.0)	33 (7.0)	<.0001[a]	328 (69.3)	145 (30.7)	<.0001[a]
	Yes	34 (68.0)	16 (32.0)		20 (40.0)	30 (60.0)		9 (18.0)	41 (82.0)	
SCID-I/P–derived diagnosis										
2.5 y postdeployment	No	384 (97.0)	12 (3.0)	<.0001[b]	362 (91.4)	34 (8.6)	<.0001[b]	267 (67.4)	129 (32.6)	<.0001[b]
	Yes	13 (48.1)	14 (51.9)		8 (29.6)	19 (70.4)		1 (3.7)	26 (96.3)	

[a]χ^2 test.
[b]Fisher exact test.
Abbreviations: PCL = PTSD Checklist-Civilian version; PTSD = posttraumatic stress disorder; SCID-I/P = Structured Clinical Interview for *DSM-IV-TR* Axis I Disorders, Research Version, Patient Edition.

Table 3. Difference in Use of Mental Health Service in USPER Responders Versus Nonresponders at 4 Assessments

		Psychiatric Service Use			Psychiatric Medicine			Military Psychological Treatment		
Time of Assessment	Responder	No (%)	Yes (%)	χ^2 Test *P* Value	No (%)	Yes (%)	χ^2 Test *P* Value	No (%)	Yes (%)	χ^2 Test *P* Value
5–6 wks before deployment (baseline)	Yes	539 (94.1)	34 (5.9)	.92	507 (88.5)	66 (11.5)	.15	373 (65.1)	200 (34.9)	.22
	No	122 (93.8)	8 (6.2)		109 (83.8)	21 (16.2)		92 (70.8)	38 (29.2)	
At homecoming	Yes	515 (95.2)	26 (4.8)	.02	481 (88.9)	60 (11.1)	.06	372 (68.8)	169 (31.2)	.01
	No	146 (90.1)	16 (9.9)		135 (83.3)	27 (16.7)		93 (57.4)	69 (42.6)	
After 7 mo	Yes	296 (95.8)	13 (4.2)	.08	281 (90.9)	28 (9.1)	.02	214 (69.3)	95 (30.7)	.12
	No	365 (92.7)	29 (7.3)		335 (85.0)	59 (15.0)		251 (63.7)	143 (36.3)	
2.5 y postdeployment	Yes	492 (94.4)	31 (5.6)	.93	460 (88.0)	63 (12.0)	.65	337 (64.4)	186 (35.6)	.10
	No	169 (93.9)	11 (6.1)		156 (86.7)	24 (13.3)		128 (71.1)	52 (28.9)	

frequent than the proportion using psychiatric services. At all 4 assessments, the proportion receiving psychotherapy was high. In those with high PTSD symptomatology, the proportion receiving psychotherapy ranged from 69.2% to 82.0% across assessments. The proportion with a SCID-I/P PTSD diagnosis using psychiatric services was 51.9%, and 70.4% received psychiatric medicine. All but 1 person with a PTSD diagnosis (96.3%) received psychotherapy. Overall, 83% of all who at any time across the assessments reported high PTSD symptomatology had utilized psychiatric services, psychiatric medicine, or psychotherapy.

Overall, those reporting high PTSD symptomatology before deployment and at homecoming did not have a significantly higher psychiatric service use or psychiatric medicine use from 2009 through 2012 compared to those with low symptomatology. However, analyses indicated that this changed over time; at the last 2 assessments, the use of any type of mental health service was significantly higher in those with high PTSD symptoms (with 1 exception at the 7-month assessment—this association was only borderline significant [$P = .07$]).

The use of mental health services was significantly ($P < .05$) or at trend level ($P < .10$) higher in USPER nonresponders than in responders at homecoming and 7 months postdeployment (Table 3). There was no difference at baseline or at 2.5 years postdeployment.

DISCUSSION

This study found that the proportion of Danish soldiers reporting high PTSD symptoms was 5% at the 7-month assessment and largely 10% at 2.5 years postdeployment, indicating an increase over time. Overall, 37% of the soldiers utilized mental health services during the study period; 6% utilized psychiatric services, 12.4% redeemed a prescription for psychiatric medicine, and approximately one-third received psychotherapy. Importantly, 83% of soldiers with self-reported high PTSD symptomatology received professional help for their mental health problem, and 96% of those with a PTSD diagnosis at 2.5 years postdeployment had received psychotherapy.

Differing prevalences of high PTSD symptomatology postdeployment have been reported, ranging from 3% to 11% in studies of OEF veterans.[4,14,33,34] The PTSD prevalence estimated in our study falls within the ranges of previous studies; however, a general observation is that US samples have a higher PTSD prevalence than other Western samples. This may be due to differences in combat exposure, in access to health care services, or in methodological factors across studies.[34,35] In the period since homecoming, the prevalence of self-reported high PTSD symptoms increased in the USPER sample. Most previous longitudinal studies[4,14,36] have found self-reported PTSD prevalence to increase over time

from predeployment to 6 months postdeployment. Recently, a Dutch study[36] with 5 assessments from predeployment to 2 years postdeployment found that the PTSD prevalence increased from 4.3% at predeployment to 8.9% at 6 months postdeployment followed by a decrease to 5.6% at the 2-year postdeployment assessment. Hence, the PTSD prevalence in our study seems to have a different trajectory over time in that PTSD prevalence continues to rise through the 2.5-year assessment compared to the Dutch study[36] in which it peaks after 6 months. While speculative, differences in, for example, early mental health service utilization, which could enhance the chances for early identification of PTSD cases, might account for the differing rates of PTSD symptoms arising after 6 months in the 2 cohorts or this difference could be explained by diversities in methods for assessing PTSD symptomatology. However, even if mental health service utilization commences later in Denmark compared to Holland, reassuringly, we found that 96.3% of those who had a PTSD diagnosis and that 83% of those who had high self-reported PTSD symptom level had been in contact with mental health services.

Use of mental health services has been examined in previous studies. In a survey study[12] based on confidential self-report among returned OEF combat soldiers in 2011, 17% visited a mental health professional within 6 months of homecoming and 6% reported having received psychiatric medication within the last month at the 6-month postdeployment assessment. Another anonymous study[11] among US active soldiers found that within the last year, 21% had at least 1 visit at mental health care service and 11% had a medical prescription for anxiety, depression, or sleep problems. This study[11] did not indicate whether or when the participants had been deployed. In a cohort of army soldiers deployed to Afghanistan in 2003, 6.6% reported at a 4-month assessment after homecoming that they had received professional mental health care within the last month.[4] Finally, in a 1-year follow-up after the Post-Deployment Health Assessment used in the US army at homecoming, 19% of soldiers were seen or treated in mental health care settings.[14] As such, the proportions of homecoming soldiers using mental health services have differed between studies, and direct comparisons are difficult due to different ways of measuring mental health service utilization. However, in our study, which had a longer follow-up period, we found, as expected, a somewhat higher proportion (37% of the sample) utilizing mental health services in the Danish sample compared to the above-mentioned studies, mainly due to the high number of soldiers receiving psychotherapy in the Military Psychological Division. The high proportion using mental health services in Denmark may be partly explained by free access to health care and the veteran centers' proactive screening for psychological symptoms after homecoming.

In the general Danish population, the probability of being treated for any psychiatric disorder before 50 years of age is 22% for men and 25% for women, but these estimates do not include psychotherapy from the Military Psychological Division.[37] Another report,[38] though non–peer-reviewed, found that first-time deployed Danish male soldiers compared with an age- and calendar-matched control population had a markedly lower use of psychiatric services before deployment; however, the soldiers' use of these services increased to almost the level of the control population after deployment (17% vs 19%, respectively). Thus, while this was not statistically tested in our study, when comparing the use of psychiatric services with a background population, it can cautiously be added that the deployed soldiers do not seem to have a higher risk of receiving psychiatric treatment compared with the background population.

The results of the current study demonstrate that, among those with confidentially reported high PTSD symptomatology, up to 82% received psychotherapy. In other words, the Military Psychological Division is in contact with a large proportion of the soldiers who report high posttraumatic stress symptoms. The proportion who utilized psychiatric services was much lower than the proportion receiving psychotherapy. At least 3 explanations for this difference can be considered. First, psychiatric service is generally initiated only in cases with severe PTSD symptomatology, whereas psychotherapy is more commonly applied as a first response and nonmedical symptom treatment. Second, in Denmark, the Military Psychological Division has a proactive approach toward the homecoming veterans; for instance, all soldiers are routinely contacted 6 months postdeployment where they can report back if they would like to be contacted by a military psychologist. Further, it is mandatory for deployed soldiers to attend a 3-month homecoming program that includes group sessions in which military psychologists teach soldiers about psychological reactions after combat, and soldiers are encouraged to contact the Military Psychological Division if they have any mental health problems related to deployment. This program is probably increasing identification of soldiers who could benefit from psychotherapy and could therefore explain the large proportion receiving psychotherapy at the Military Psychological Division. This finding is important since the military psychologists are likely to function as a gateway to psychiatric treatment as they often refer soldiers to psychiatric services. Third, it could be that early adequate psychotherapy might have prevented a more severe course of symptomatology that in time would have required psychiatric treatment. This may be what is mirrored in the significant association between use of Military Psychological Division psychotherapy in those with high symptomatology at the 2 early assessments at which the relationship is nonsignificant with use of psychiatric services and psychiatric medicine, respectively. In fact, this latter mentioned difference in significant association between high PTSD symptoms and type of mental health service (psychiatric service/medicine vs psychotherapy) indicates that accurate screening for those who will be utilizing *psychiatric* treatment after deployment based on

symptom assessment alone at the 2 first assessments might not be feasible, but it would be good at pointing out who will be offered psychotherapy at the Military Psychological Division. Of course, this screening scenario is only relevant under the assumption that soldiers would be self-reporting PTSD symptomatology in the same way in a nonanonymized screening situation, which studies[15–18] have found not to be the case; that is, they tend to underreport then.

Our results also show that 17% of those reporting high PTSD symptoms never receive help from mental health services. It might be that these soldiers would have benefited from professional help, and some of them may have approached treatment with private psychologists or psychiatrists on which we have no data, or it might be that these soldiers have experienced natural symptom relief. Anyhow, a closer examination of what characterizes those who report high symptoms but never receive mental health services may illuminate how to identify and offer help to these soldiers. Overall, our results show that a very high proportion (83%) of those who at any time reported high PTSD symptomatology have received help from mental health services. This finding is very encouraging as it may indicate that the Danish soldiers in need are indeed utilizing mental health services, especially from the Military Psychological Division, indicating low fear of stigmatization or negative influences on their military career in help seeking. This corresponds well with a recent review[5] examining stigma as a barrier to seeking help for mental health problems that concluded that those who needed help in most cases utilized mental health services, regardless of anticipated stigma linked to this utilization.

Especially at homecoming, discrepancies in mental health service utilization between responders and nonresponders are visible. Our analyses indicate that nonresponders at this time point utilize mental health services to a significantly higher degree. This is also the case with psychiatric medicine at the 7-month postdeployment assessment. This meant, at least in this particular survey, that screening procedures implemented at these 2 assessments were in a biased sample representing soldiers with a lower use of mental health services that consequently would identify fewer who will need/utilize mental health services. At the 2.5-year postdeployment assessment, however, there were no differences in mental health service utilization between responders and nonresponders, indicating that those participating in the final USPER assessment are a representative cohort with regard to mental health care use in this time period.

Strengths and Limitations

First, this study relied on confidentially collected data, which supposedly leads to unbiased reporting of PTSD symptoms. This, combined with complete follow-up on use of mental health treatment from the national Danish registers, strengthens our study. While complete follow-up was available in the register-based data, it is important to mention that the response rate was low, especially at the survey-based 7-month postdeployment assessment. Also, we did not have access to data on psychological or psychiatric treatment received at private practice, but we believe that most treatment takes place in the public system, which is free of charge, as opposed to private practice treatment. A limitation is that the USPER cohort is small compared to many of the US studies. However, despite the relatively small sample size, our cohort included the entire Danish OEF team deployed at the time. This is a strength, especially as we were able to assess use of mental health services for the entire team, thereby increasing the representativeness of the results for other Danish OEF teams deployed around that time period.

To summarize, it is discouraging that over time the prevalence of self-reported high PTSD symptoms rose; however, it seems that mental health services are provided to most of those in need.

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