MILITARY MEDICINE

ORIGINAL ARTICLES

MILITARY MEDICINE, 173, 11:1051, 2008

Prevalence of Mental Health Problems, Treatment Need, and Barriers to Care among Primary Care-Seeking Spouses of Military Service Members Involved in Iraq and Afghanistan Deployments

Karen M. Eaton, MS; COL Charles W. Hoge, MC USA*; Stephen C. Messer, PhD†; Allison A. Whitt, BS*; CPT Oscar A. Cabrera, MS USA‡; MAJ Dennis McGurk, MS USA‡; LTC Anthony Cox, MS USA*; COL Carl A. Castro, MS USA§*

ABSTRACT Military spouses must contend with unique issues such as a mobile lifestyle, rules and regulations of military life, and frequent family separations including peacekeeping and combat deployments. These issues may have an adverse effect on the health of military spouses. This study examined the mental health status, rates of care utilization, source of care, as well as barriers and stigma of mental health care utilization among military spouses who were seeking care in military primary care clinics. The data show spouses have similar rates of mental health problems compared to soldiers. Spouses were more likely to seek care for their mental health problems and were less concerned with the stigma of mental health care than were soldiers. Services were most often received from primary care physicians, rather than specialty mental health professionals, which may relate to the lack of availability of mental health services for spouses on military installations.

INTRODUCTION

The life of a military spouse has unique concerns. Among the major issues are adjustment to a mobile lifestyle, isolation from the civilian community and extended family, adjustment to the rules and regulations of military life, and frequent family separations.[1–6] In addition, worries such as jobs, childrearing, and household duties compound these stressors.[7–9] Military families stationed overseas endure even greater stresses because they must adjust to an entirely new culture as well as cope with the military life.[10] All of these stressors may have an adverse effect on the physical and mental health of the military spouse.

During any separation, but especially during combat operations, the demands placed on military spouses often increase as they incur new roles and responsibilities while their spouse is deployed. Spouses must maintain their own everyday lives as well as contend with the constant uncertainty regarding the well-being and safety of their deployed spouse.[7,11–13] Research has shown that spouses and children often exhibit greater symptoms of depression and anxiety, as well as increased use of medical and mental health clinics during and shortly after separation.[1,2,10,14–16] The current study investigates the prevalence of self-reported mental health problems among a group of military spouses seeking care in the on-post primary care clinic. The study also investigates treatment need as well as access and barriers to care.

*Division of Psychiatry & Behavioral Sciences, Walter Reed Army Institute of Research 503 Robert Grant Avenue, Silver Spring MD 20910.

†Department of Psychiatry, Walter Reed Army Medical Center, 6900 Georgia Avenue, NW, Washington DC 20307.

‡U.S. Army Medical Research Unit-Europe, APO AE 09042-1030.

§U.S. Army Medical Research and Materiel Command, 504 Scott Street, Fort Detrick, MD 21702.

Portions of this manuscript were presented at the 41st International Applied Military Psychology Symposium, May 23–27, 2005, Washington, DC and at the 2005 American Psychological Association Annual Conference, August 18–21, 2005, Washington, DC.

This manuscript was received for review in January 2007. The revised manuscript was accepted for publication in May 2008.

Research has shown that the health and well-being of military spouses is important, both to the individual family unit and to the operational unit. Spouses who perceive the military lifestyle to be stressful show less overall psychological well-being and an increased vulnerability to distress than other spouses.[14,17–18] Furthermore, soldiers with dissatisfied spouses are more likely to leave the military than those with spouses who are satisfied with military life.[19–23] Therefore, the health and well-being of military spouses is relevant to the retention of a robust and experienced force. A recent study investigated the prevalence rates of mental health problems among soldiers involved in deployments, as well as barriers to and the stigma associated with seeking care for these problems.[24] It showed that soldiers deployed to Iraq and/or Afghanistan had higher rates of mental health problems (major depression, post-traumatic stress disorder [PTSD], alcohol misuse) than before deployment, particularly with regard to PTSD. Rates of mental health problems were higher among soldiers deployed to Iraq than those deployed to Afghanistan, most likely due to the higher combat exposure among soldiers in Iraq. Furthermore, only a small number of soldiers screening positive for a mental health problem received help from a health care professional for a mental health problem (23–40%).[24] Concerns about stigma were highest among the soldiers who were in the most need of help from mental health services. Soldiers screening positive for a mental health disorder reported more barriers to care and were twice as likely to report concern of stigmatization than those screening negative.[24]

Studies have been performed to determine the scope and severity of mental health problems among soldiers returning from a combat deployment; however, there are relatively few studies of military spouses who may also be affected by the soldiers' deployments. In May 2007, the Committee on Oversight and Government Reform held a hearing on mental health problems in soldiers returning from Iraq and Afghanistan. Based on testimony from soldiers and their families, the committee, along with the National Institute of Mental Health concluded that military deployments affect the mental health of family members as well as soldiers.

Specifically, we are not aware of any study having been performed to assess the prevalence of mental health problems among spouses of service members. The purpose of this study was to (1) determine the prevalence of self-reported mental health problems in primary care-seeking spouses of service members deployed to Iraq or Afghanistan, (2) determine the proportion of those spouses with mental health concerns who are not receiving services, and (3) identify perceived barriers to behavioral health care.

METHODS

Participants

This article summarizes data from the first phase of a study designed to assess the impact of military deployments on the health and well-being of military spouses. In 2003, a research team from the Walter Reed Army Institute of Research (WRAIR) conducted surveys among spouses at a large military base in the eastern United States as part of a study that also included soldiers.[24] Spouses were approached in the two on-post primary health care clinics that serve soldiers from combat operational units and their family members. These clinics are the primary sources of health care on post for operational soldiers and their military spouses and children. They include primary care medical services, obstetrics and gynecology, pediatrics, and pharmacy services and are one of the most widely and consistently used services for spouses. Although some spouses receive primary care from community sources off post, most get their primary care from one of these two clinics because there is no need to pay for any portion of health care services. Specialty mental health services are available on post for soldiers, but are outsourced to civilian professionals for family members. Additionally, spouses were approached at a battalion level Family Readiness Group (FRG) meeting. A FRG provides social support to spouses, as well as disseminates information regarding unit activities, and information regarding Army benefits and community resources available to military families.

In this first attempt at characterizing mental health problems among military spouses, we chose to recruit subjects in the primary care clinics that serve the units involved in operational deployments. This sample is not likely to be representative of the general population of military spouses, but is likely to be representative of spouses of soldiers from operational units involved in combat deployments. The two clinics selected are unique primary care facilities colocated with the operational units that provide care to the entire family.

Informed consent was obtained from spouses who elected to participate in the study. A total of 1,828 surveys were distributed to spouses, 1,707 spouses signed consent forms agreeing to participate, and 940 spouses actually participated in the study by returning completed surveys (response rate: 51%). Of those 940 total spouses, 737 (78%) had husbands who were deployed mostly to Iraq or Afghanistan at the time of this study. The majority (566, 60%) of the surveys were completed by the participants while they were waiting in the primary care clinic. Some participants were unable to complete the survey during their clinic visit. These participants were given preaddressed stamped envelopes and asked to take the survey with them, complete it, and return it by mail. A total of 331 (35%) participants returned their completed survey by mail. Forty-three (4.5%) surveys were completed at the FRG meeting.

Description of Survey and Case Definitions

The surveys were administered under an approved human use protocol that followed WRAIR regulations (WRAIR Protocol 1026, "Impact of PERSTEMPO and Deployment Experiences on the Mental Health and Functioning of Soldiers and their Families"). The survey focused on past month symp-

tions of major depressive disorder and generalized anxiety disorder. We used two case definitions for major depression and generalized anxiety disorders; a broad screening definition that followed current psychiatric diagnostic criteria,[25] but did not include criteria for functional impairment, and a strict definition that included both the current psychiatric diagnostic criteria as well as a measure of functional impairment. Functional impairment was measured with one question asking whether participants were having difficulty accomplishing their daily tasks at home, at work, or in getting along with other people. Those participants who reported that their problems made it "very difficult" or "extremely difficult" to function were considered to be functionally impaired.[24] Self-report measures have been shown to be thorough and objective methods to evaluate depression diagnoses and treatment response.[26] Major depression and generalized anxiety were measured using the Patient Health Questionnaire (PHQ).[27–29] The PHQ, which is the self-administered version of the Primary Care Evaluation of Mental Disorders has been shown to have diagnostic validity comparable to the clinician-administered Primary Care Evaluation of Mental Disorders and is more efficient to use.[27] The PHQ has been found to be a reliable and valid measure of depressive disorders as well as depression severity and has been found to be a useful clinical and research tool.[30] The PHQ was found to be accurate in recognizing major depression, but also in recognizing subthreshold depressive disorders in the general population.[31] Questions measuring alcohol use and abuse were obtained from the Two-Item Conjoint Screen.[32] Participants were also asked whether they were currently experiencing a stress, emotional, alcohol, or family problem at a mild, moderate, or severe level and whether they were currently interested in receiving help for that problem. Additionally, participants were asked about their use of mental health services, to include mental health care received in primary health care clinics (military or civilian physicians), specialty mental health services (military or civilian), as well as counseling (military chaplains and civilian clergy). We also asked about perceptions of stigma and barriers to care using previously described methods.[24]

RESULTS

A total of 940 spouses seeking care in the primary clinic or attending a FRG meeting, completed and returned their surveys to WRAIR. Demographics of the sample can be found in Table I and are representative of the demographics of married soldiers.

Of the 940 spouses, 155 (16.9%) reported that they were currently experiencing a moderate to severe emotional, alcohol, or family problem. Additionally, 176 (19.3%) spouses reported that they were currently interested in receiving help for a stress, emotional, alcohol, or family problem. One hundred ninety-seven (21.7%) spouses reported that the stress or emotional problems impacted negatively on the quality of their work or other activities.

TABLE I. Demographics of Army Spouses

	Frequency No.	
Age of Spouse (years)		
18–19	23 (2.6%)	
20–24	210 (23.3%)	
25–29	241 (26.7%)	
30–39	328 (36.4%)	
40+	99 (11.0%)	
Rank of service member		
Junior Enlisted	185 (20.7%)	
Noncommissioned Officer	353 (39.5%)	
Senior Noncommissioned Officer (NCO)	173 (19.4%)	
Officer/Warrant Officer	183 (20.5%)	
Do you have children?		
Yes	698 (79.0%)	
No	186 (21.0%)	
	Median	Mean
Years of service	8.0	9.8
Years married	4.0	5.2
No. of deployments during marriage >30 days	3.0	5.7

$N = 940$.

Using the DSM-IV definition, which is the broad screening definition that follows current psychiatric diagnostic criteria, 182 spouses (19.5%) met screening criteria for either major depression or generalized anxiety disorders. Standard scoring criteria and cutoff scores were used in analyzing the PHQ. Specifically, 114 (12.2%) spouses screened positive for depression and 162 (17.4%) screened positive for generalized anxiety (Table II). Using the strict definition, which includes meeting both the current psychiatric diagnostic criteria as well as significant functional impairment, 74 (7.9%) screened positive for either major depression or generalized anxiety disorders, with 63 (6.7%) screening positive for major depression and 67 (7.2%) screening positive for generalized anxiety disorder. Furthermore, 33 (4.3%) spouses reported having used alcohol more than they had intended in the past 4 weeks and 22 (3.0%) indicated that they felt they wanted or needed to cut down on their drinking in the past 4 weeks.

TABLE II. Prevalence of Mental Health Problems

Major Health Outcomes	*n*
DSM-IV criteria	
Major depression	114 (12.2%)
Generalized anxiety	162 (17.4%)
Major depression or generalized anxiety	182 (19.5%)
DSM-IV criteria with functional impairment	
Major depression	63 (6.7%)
Generalized anxiety	67 (7.2%)
Major depression or generalized anxiety	74 (7.9%)
Alcohol misuse	
In the past month, have you used alcohol more than you meant to?	33 (4.3%)
Have you felt you wanted or needed to cut down on your drinking in the past month?	22 (3.0%)

$N = 940$.

With regard to health care utilization, spouses were asked where they received mental health services for a stress, emotional, alcohol, or family problem in the past year. Six different types of health care providers were examined: mental health care professional at a military facility, mental health care professional at a civilian facility, general medical doctor at a military facility, general medical doctor at a civilian facility, military chaplain, and civilian clergy. We analyzed health care utilization among the entire spouse sample (N = 940), spouses screening negative for a mental health problem (n = 866), and spouses screening positive for a mental health problem (n = 74) using strict case definitions. More than 68% of spouses who screened positive received mental health care from at least one of the providers compared to 22.0% of those screening negative. However, we specifically wanted to examine where spouses were seeking care for their mental health problems. Forty-one percent of spouses screening positive sought specialty mental health care services. In addition, almost 19% sought care only from their primary care physicians and an additional 8% received pastoral counseling (Table III).

This study also investigated barriers encountered by spouses who screened positive for mental health problems (Table IV). Many spouses reported practical reasons for not seeking care. The most commonly perceived barriers to seeking care were difficulty in getting time off from work or child care for treatment (43.1% among spouses who screened positive for a mental health problem), difficulty getting an appointment (26.0%), and cost (26.0%). Twenty percent reported that receiving care would be too embarrassing and 22% reported that they would be seen as weak.

TABLE IV. Selected Perceived Barriers to Care and Stigma

	Screen Positive
Barriers to care	*n*
I don't know where to get help	15 (20.6%)
It is difficult to schedule an appointment	19 (26.0%)
There would be difficulty getting time off work or child care for treatment	31 (43.1%)
Mental health care costs too much money	19 (26.0%)
Stigma	
It would be too embarrassing	15 (20.5%)
It would harm my spouse's career	15 (20.5%)
I would be seen as weak	16 (22.4%)

N = 74. Percent who agree or strongly agree with statement. Percentages are based on valid percent (i.e., missing values are not included).

DISCUSSION

Military spouses are presented with many situations, concerns, and stressors unique to military life. In this primary care-seeking sample, >20% of spouses reported that stress and emotional problems were having a significant effect on their lives. Using the DSM-IV broad screening definition, 20% of spouses met screening criteria, while almost 8% of the military spouses screened positive for major depression or generalized anxiety disorder using the strict definition which required a report of significant impairment in daily life as a result of the mental health problems. This is very similar to the rates seen among soldiers screening positive upon returning from combat (15.6%–17.1%) using the same broad screening criteria.[24] The soldiers in the comparison sample were not primary care seeking. However, soldiers have a comprehensive health care system available to them on the military installation, including mental health services. Spouses and children, on the other hand, have primary medical care available to them on the military installation, but must use civilian health care services for specialty mental health care needs.

One of the main findings of this study is that these primary care-seeking spouses are much more likely to seek care for a mental health problem than soldiers. Almost 70% of spouses

TABLE III. Health Care Utilization for Stress, Emotional, Alcohol, or Family Problem according to Type of Service Provider

	All Spouses (N = 940)	Screen Negative (n = 866)	Screen Positive (n = 74)
	n	*n*	*n*
Specialty mental health			
Total	130 (13.8%)	100 (11.5%)	30 (40.5%)
Military Mental Health Professional	44 (4.7%)	32 (3.7%)	12 (16.2%)
Civilian Mental Health Professional	104 (11.1%)	81 (9.4%)	23 (31.1%)
Primary care			
Total	92 (9.8%)	78 (9.0%)	14 (18.9%)
Military medical doctor	83 (8.8%)	71 (8.2%)	12 (16.2%)
Civilian medical doctor	21 (2.2%)	18 (2.1%)	3 (4.1%)
Total—Specialty mental health and primary care	222 (23.6%)	178 (20.6%)	44 (59.5%)
Clergy			
Total	22 (2.3%)	16 (1.8%)	6 (8.1%)
Military chaplain	20 (2.1%)	15 (1.7%)	5 (6.8%)
Civilian clergy	5 (0.5%)	4 (0.5%)	1 (1.4%)
Total— specialty, mental health, primary care, and clergy	244 (25.9%)	194 (22.4%)	50 (67.6%)

screening positive, who reported functional impairment, sought care for a mental health problem in the past year from any provider. In contrast, only 23% to 40% of soldiers screening positive for a mental health problem (N = 338), also using the same strict case definition, sought care for a mental health problem from any health care professional, either military or civilian.[24] One of our main findings is that primary care physicians on post provided a substantial portion of mental health services. Almost 20% of spouses who screened positive for a mental health problem received care only from a primary care physician (either military or civilian), most often at a military facility. This raises the question of whether the primary health care services available to spouses on the military installation are adequate to treat mental health problems.

One study reported that >30% of patients in civilian settings, with current mental health problems seen by primary care physicians do not report these problems mostly because of their beliefs that their primary care physician is not the right person to talk to or that mental health problems should not even be discussed.[33] In addition to primary care physicians being trained to recognize and treat mental health problems, receiving care by primary care clinicians also has advantages such as convenience and a lower degree of stigma than care by specialty mental health clinicians. However, primary care clinicians may be overloaded with patients and not have sufficient time to assess for mental health problems. Furthermore, office visits associated with mental health problems place a heavier burden on the physician than other types of consultations.[34] Thus, there are limitations in conducting a full assessment of a patient's mental health status in a primary care setting.

Reasons cited by the primary care-seeking spouses for not accessing specialty mental health services include barriers to care such as difficulty with child care and getting time off of work as well as difficulty scheduling an appointment, cost, and not knowing where to get help. One encouraging finding is that military spouses were much less likely to report concerns about stigma compared to soldiers in a recent study.[24] For example, only 20% of spouses screening positive for a mental health problem felt that receiving treatment would be too embarrassing, whereas 47% of soldiers who completed a similar survey reported this. Studies are currently being undertaken to address the problem of stigma and barriers by providing outreach, education, and changes in the models of health care delivery. Having specialty mental health services available to spouses on the military installation and in primary care clinics may have an added benefit of encouraging soldiers who need care to come to the clinic.

The most important limitation is the convenience sampling of spouses presenting in a primary care setting at only one military installation. The convenience sample involved spouses concerned with health care issues for either themselves or their children. Primary care populations typically have higher rates of mental health problems than general population samples, and thus the study prevalence estimates are not likely to be representative of military spouses at large. However, obtaining representative samples from military spouses can be challenging because spouses do not consistently attend FRG meetings and may have child care and work situations that limit their use of other military services. One of the most widely used services is the primary care clinic, which they can attend together with their soldier spouse during times when the unit is in garrison. The services provided in the primary care clinic are routinely used by the majority of military spouses from the operational units, and provided a convenient way to access a large number of spouses for this survey in a short period of time. Although the prevalence estimate may not be representative, the study provides useful data on perceptions of stigma and willingness to access care for mental health issues. It is also possible that the spouses with the most serious mental health concerns may, in fact, be the ones who do not seek any type of health care at all.

This study showed that primary care-seeking military spouses exhibit similar rates of mental health problems as soldiers returning from combat. Spouses are more willing to seek help for their mental health problems than soldiers, but their main source of care in this study was the primary care physician at the on-post health care clinic, which research has shown may not be adequate to treat mental health problems. On-post mental health care services are generally not available to these spouses who are exhibiting a need for specialty services. Recent findings from the Department of Defense Mental Health Task Force report (June 2007) indicate that mental health services for spouses are not adequately provided through the TRICARE insurance network.[35] This may help to explain why military spouses in this study were more likely to utilize primary care clinicians for their mental health needs. One of the important findings was that spouses are less likely to be concerned with stigma than soldiers and indicated more willingness to use specialty mental health services if they were available. Therefore, providing military spouses with the appropriate level of on-post specialty mental health services may serve to improve the health of the family unit and, in turn, better support soldiers' military careers, satisfaction, and retention.

This study provides preliminary data on the mental health of military spouses during the current war. Further studies are needed to assess the impact of multiple deployments on family members. Representative samples of spouses not already seeking care in a health care setting are important. Comparisons with a sample of spouses from the civilian sector would also help to clarify the true prevalence of mental health problems in military spouses and would highlight the unique circumstances faced by these spouses. Finally and most importantly, studies are needed to assess the adequacy of mental health services for spouses and the barriers to care associated with using civilian specialty mental health services.

ACKNOWLEDGMENTS

We thank the Department of Military Psychiatry at WRAIR. We also thank MAJ Lolita Burrell and her staff and the medical staff at the clinics. Finally, we thank Military Operational Medicine for allowing this important research to be conducted.

REFERENCES

1. Ursano RJ, Holloway HC, Jones DR, Rodriguez AR, Belenky, GL: Psychiatric care in the military community: family and military stressors. Hosp Commun Psychiatry 1989; 40: 1284–9.
2. Black WG: Military-induced family separation: a stress reduction intervention. Social Work 1993; 38: 273–80.
3. Paulus PB, Nagar D, Larey TS, Camacho LM: Environmental, lifestyle, and psychological factors in the health and well-being of military families. J Appl Soc Psychol 1996; 26: 2053–75.
4. Rosen LN, Moghadam LZ: Social support, family separation, and well-being among military wives. Behav Med 1988; 14: 64–70.
5. Martin JA, Ickovics JR: The effects of stress on the psychological wellbeing of Army wives: initial findings from a longitudinal study. J Hum Stress 1987; 13: 108–15.
6. Durand DB: Army wife, Army mother. In: Military Life: The Psychology of Serving in Peace and Combat: The Military Family, Vol 3, pp 3–10, Edited by Castro CA, Adler AB, Britt TW. Westport, Praeger Security International, 2006.
7. Martin JA: Life satisfaction for military wives. Milit Med 1984; 149: 512–4.
8. Rosen LN, Carpenter CJ, Moghadam LZ: Impact of military life stress on the quality of life of military wives. Milit Med 1989; 154: 116–20.
9. Ickovics JR, Martin JA: The impact of employment on the psychological well-being of Army wives: a longitudinal study. Milit Med 1987; 152: 500–3.
10. McNulty PAF: Does deployment impact the health care use of military families station in Okinawa, Japan? Milit Med 2003; 168: 465–70.
11. Schumm WR, Bell DB, Knott B, Rice RE: The perceived effect of stressors on marital satisfaction among civilian wives of enlisted soldiers deployed to Somalia for Operation Restore Hope. Milit Med 1996; 161: 601–6.
12. Schumm WR, Bell DB, Gade PA: Effects of a military overseas peacekeeping deployment on marital quality, satisfaction, and stability. Psychol Rep 2000; 87: 815–21.
13. Wright KM, Burrell LM, Schroeder ED, Thomas JL: Military spouses: coping with the fear and the reality of service member injury and death. In: Military Life: The Psychology of Serving in Peace and Combat: The Military Family, Vol. 3. Edited by Britt TW, Adler AB, Castro CA. Westport, Praegar Security International, 2006: 64–90.
14. Knapp TS, Newman SJ: Variables related to the psychological well being of Army wives during the stress of an extended military separation. Milit Med 1993; 158: 77–80.
15. Rosen LN: Life events and symptomatic recovery of Army spouses following Operation Desert Storm. Behav Med 1996; 21: 131–9.
16. Kelley ML: The effects of military-induced separation on family factors and child behavior. Am J Orthopsychiatry 1994; 64: 103–11.
17. Rosen LN, Westhuis DJ, Teitelbaum JM: Patterns of adaptation among Army wives during Operations Desert Shield and Storm. Milit Med 1994; 159: 43–7.
18. Rosen LN, Moghadam LZ: Predictors of general well being among Army wives. Milit Med 1991; 156: 357–61.
19. Bruce RA, Burch RL: Officer career development: modeling married aviator retention. Navy Personnel Research and Development Center, San Diego CA, ADA210081, 1989.
20. Rosen LN, Durand DB: The family factor and retention among married soldiers deployed in Operation Desert Storm. Mil Psychol 1995; 7: 221–34.
21. Griffith JC, Doering ZD, Mahoney RS: Description of spouses of officers and enlisted personnel in the U.S. Armed Forces. Arlington, VA, Defense Manpower Data Center, 1986.
22. Klein HA, Tatone CL, Lindsay NB: Correlates of life satisfaction among military wives. J Psychol 2001; 123: 465–75.
23. Drummet AR, Coleman M, Cable S: Military families under stress: implications for family life education. Fam Relations 2003; 52: 279–87.
24. Hoge CW, Castro CA, Messer SM, McGurk D, Cotting DI, Koffman RL: Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. N Engl J Med 2004; 351: 13–22.
25. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Ed 4. Washington, DC, American Psychiatric Press, Inc., 2000.
26. Zimmerman M, Posternak MA, Chelminski I: Using a self-report depression scale to identify remission in depressed outpatients. Am J Psychiatry 2004; 161: 1911–3.
27. Spitzer RL, Kroenke K, Williams JBW: Validation and utility of a self-report version of PRIME-MD: The PHQ Primary Care Study. JAMA 1999; 282: 1737–44.
28. Lowe B, Spitzer RL, Grafe K, et al: Comparative validity of three screening qnestionnaires for DSM-IV depressive disorders and physicians' diagnoses. J Affect Disord 2004; 8: 131–40.
29. Henkel V, Mergl R, Kohnen R, Maier W, Moller HJ, Hegerl U: Identifying depression in primary care: a comparison of different methods in a prospective cohort study. Br Med J 2003; 326: 200–1.
30. Kroenke K, Spizter RL, Williams JB: The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med 2001; 16: 606–13.
31. Martin A, Rief W, Klaiberg A, Braehler E: Validity of the Brief Patient Health Questionnaire Mood Scale (PHQ-9) in the general population. Gen Hosp Psychiatry 2006; 28: 71–7.
32. Brown RL, Leonard T, Saunders LA, Papasouliotis O: A two-item conjoint screen for alcohol and other drug problems. J Am Board Fam Pract 2001; 14: 95–106.
33. Bushnell J, McLeod D, Dowell A, et al: (2005) Do patients want to disclose psychological problems to GPs? Fam Pract. Available at http://fampra.oxfordjournals.org/cgi/reprint/cmi080v2; accessed October 5, 2005.
34. Zantinge EM, Verhaak PF, Kerssens JJ, Bensing JM: The workload of GPs: consultations of patients with psychological and somatic problems compared. Br J Gen Pract 2005; 55: 609–14.
35. Department of Defense Task Force on Mental Health: An Achievable Vision: Report of the Department of Defense Task Force on Mental Health. Falls Church, VA, Defense Health Board, 2007.