

Recognition and Treatment of Anxiety Disorders in Primary Care

By Risa B. Weisberg, PhD
and Kristin M. Maki, PhD

KEY WORDS

anxiety disorders, primary care, diagnosis, assessment tools, comorbidity, pharmacotherapy, psychosocial treatment

ABSTRACT

Anxiety disorders are highly prevalent in primary care settings and are associated with a great deal of functional impairment and societal costs. Patients with anxiety disorders are more likely to present for treatment in general medical practices than in mental health care settings. Primary care providers may serve as gatekeepers to specialized mental health care, or may be the sole providers of such treatment. However, a number of barriers exist to the identification and treatment of anxiety disorders in primary care. A discussion of these obstacles is presented, as well as some recommendations for assessment tools and treatment options. Mental Fitness. 2003;2(4):54-61

INTRODUCTION

Anxiety disorders are the most prevalent class of psychiatric disorders in the United States^{1,2} and are among the most common mental health problems seen in the primary care setting.^{3,4} Rates of current anxiety disorder prevalence in primary care have been estimated at 15%.³ Approximately 11% of all visits to primary care physicians are prompted by complaints of anxiety and nervousness.⁵

The majority of patients with psychiatric disorders initially present in general medical settings⁶ and a general medical practitioner sees 70% to 90% of those patients who develop a mental disorder within 1 year of its onset.⁷ Not only are primary care physicians the first health care professionals seen by many patients with anxiety disorders, but these physicians are often the only

providers from whom patients seek and receive treatment. Individuals with a psychiatric disorder are more likely to seek help from a general medical physician than from a mental health specialist⁸ and the plurality of individuals with an anxiety disorder receive mental health treatment from a general medical practitioner rather than a mental health specialist.^{9,10} For example, one study of a national sample of 1636 adults found that 84% of those with an anxiety disorder saw a primary care provider, as opposed to just 13% who had a visit with a mental health specialist.¹¹ Therefore, in order to reach and treat the most patients with anxiety problems, it is essential to target primary care providers with information about the presentation, diagnosis, and treatment of these disorders. Unfortunately, rates of recognition and treatment of anxiety disorders are low in the primary care setting.

DEFINITION OF THE PROBLEM

Anxiety disorders, as specified in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*¹² are a class of mental health problems including panic disorder with agoraphobia, panic disorder without agoraphobia, generalized anxiety disorder (GAD), social phobia (or social anxiety disorder), posttraumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), and specific phobias. Though each of these diagnoses has its own set of symptoms and criteria, the disorders share certain key elements including anxious apprehension, somatic symptoms of hyperarousal, and often avoidance of anxiety-producing stimuli.

Anxiety disorders are associated with great functional impairment and cost. In the United States, these disorders were estimated to toll approximately \$63.1 billion in 1998.¹³ In primary care, anxiety disorders



Dr. Weisberg is assistant professor (research) and Dr. Maki is postdoctoral fellow, both in the Department of Psychiatry and Human Behavior at Brown University, Providence, RI.

Dr. Weisberg receives grant and research support from and is consultant to Pfizer. Dr. Maki receives research support from Pfizer.

have been found to be associated with significantly poorer social, family, and work functioning,^{14,15} as well as with increased utilization of medical care from specialists and primary care providers.¹⁵⁻¹⁷

Even more concerning is the fact that anxiety disorders may present a significant risk factor for suicidal ideation and suicide attempts. A recent study of panic disorder among primary care patients concluded that suicidal ideation is highly associated with panic disorder and comorbid major depression (odds ration [OR]= 15.4).¹⁸ In our own unpublished work from the Primary Care Anxiety Project (PCAP), an ongoing, naturalistic, longitudinal study of anxiety disorders in primary care patients, we found that primary care patients with anxiety disorders were more likely to report a history of suicide attempts (20%) than the general population (4%).¹⁹ Further, we found that among our sample of primary care patients, the presence of PTSD was a greater predictor of having attempted suicide than was major depressive disorder.

RECOGNITION OF ANXIETY

Unfortunately, anxiety disorders are often unrecognized in primary care patients. For example, one study found that only 10% of family medicine patients with an anxiety disorder were accurately identified and diagnosed.²⁰ The task of identifying and accurately diagnosing an anxiety disorder can be difficult in any setting. Factors particular to the primary care practice often create greater obstacles. Setting variables include an extremely limited amount of time allotted for each office visit. Provider variables may include a lack of in-depth, specialized, psychiatric training and /or a lack of comfort with psychiatric diagnoses. Further, a number of patient variables may interfere with anxiety disorder identification. Whereas patients presenting to a mental health setting have typically already come to view their problems as, at least in part, psychological, primary care patients often do not think of their difficulties in this manner. For example, Kessler et al²¹ found that 48% of primary care patients with anxiety or depression used a normalizing attribution (eg, pressure at work) while describing their symptoms, whereas only 23% attributed their symptoms to psychological problems. Primary care patients may also focus on the somatic elements of their symptoms, a presentation that has been found to be associated with lower rates of recognition.²⁰ Katon²² found that 89% of primary care patients with panic disorder who initially presented to their general practitioners with somatic complaints had been misdiagnosed with physical problems. The most common somatic

complaints reported by these patients were cardiac symptoms, gastrointestinal symptoms, and neurological symptoms. Other physical manifestations frequently associated with anxiety include dizziness, joint and muscle pain, breathlessness, and difficulty sleeping.

Comorbidity

Comorbidity also complicates the diagnosis of anxiety disorders. Psychiatric comorbidity rates are high among primary care patients with anxiety disorders. Over 60% of participants in the PCAP were found to have more than 1 concurrent anxiety disorder, and over 40% were found to have concurrent major depressive disorder.²³ A complicated and comorbid psychiatric picture may lead to difficulties in making an accurate diagnosis.

Nonpsychiatric medical comorbidities often also coexist with anxiety disorders. Particularly high rates of medical comorbidity have been found in primary care patients with PTSD.²⁴ This can create difficulties in recognition of an anxiety disorder, especially when the focus of the patient's presentation and treatment is on a major medical illness. However, recognition in these cases is often even more important, as anxiety may exacerbate or maintain a number of chronic physical conditions. For example, gastric ulcers, hypertension, migraines, coronary artery disease, asthma, and many pain conditions often co-occur with and are influenced by anxiety disorders.²⁵ It is possible that the identification and treatment of the anxiety disorder may improve the status of the medical condition as well.

Identification and accurate diagnosis of anxiety disorders in medical patients is also complicated by the fact that many medical conditions and various substances may create symptoms that mimic those of anxiety disorders. For example, patients with endocrine disorders, cardiovascular disorders, neurological disorders, and perimenopausal women may all present with anxiety-like symptoms. Therefore, a careful screening for medical conditions is necessary in the patient who complains of anxiety symptoms. A number of drugs and substances may exacerbate or produce anxiety symptoms. These include anticholinergic drugs, marijuana and other drugs that alter perception, stimulant drugs of abuse, sympathomimetic drugs (eg, decongestants, β_2 -bronchodilators, weight reduction agents), thyroid hormone, xathine-containing drugs (bronchodilators with theophylline, over-the-counter cold and arthritis remedies, caffeine), and withdrawal symptoms of sedatives, hypnotics, alcohol, caffeine, and

tobacco.²⁶ A careful examination of the medications and substances taken by patients who present with anxiety symptoms is thus an important first step in diagnosis and designing a treatment plan.

Differential Diagnosis of Anxiety Disorders

For the reasons discussed above, the task of accurately diagnosing an anxiety disorder in the primary care setting can be difficult. Differentiating among the many different anxiety disorders can be even more problematic. In part, this is due to a high degree of overlap between symptoms and features of the disorders. For example, panic attacks are now understood to no longer be central only to panic disorder, but also often occur in patients with social phobia and GAD.¹² This can lead to very similar symptom profiles. For example, a patient with panic disorder with agoraphobia and a patient with social phobia may both present with complaints of panic attacks and avoidance of attending meetings or other crowded social gatherings. An in-depth interview and thorough knowledge of the criteria is often necessary to determine the specific diagnosis. This is typically not feasible in the primary care setting, in which many providers have not had expert-level training in psychiatric assessment. Further, it is made almost impossible by a system in which most providers have just 10 to 15 minutes to thoroughly evaluate all bodily systems and devise any necessary treatment plans. Thus, primary care providers who recognize anxiety problems in their patients typically do not differentiate between the specific disorders. For example, Harman and colleagues⁹ found that in a nationally representative sample of primary care office-based practices, the overwhelming majority of recorded anxiety disorder diagnoses were not for specific disorders. Seventy percent of anxiety disorder visits to primary care physicians were coded as “anxiety state, unspecified.”

Assignment of a specific diagnosis may possibly be unnecessary in the care of primary care patients with anxiety disorders. As we will discuss in more detail below, similar (or identical) pharmacological options can be utilized for many of the anxiety disorders. Psychotherapeutic treatments with proven efficacy do differ somewhat for each disorder, but many of the key features of these therapies are similar. Work in our lab and other research centers is currently underway to devise protocols that can be utilized for multiple anxiety disorders (eg, Barlow et al, 2002²⁷).

Assessment Tools

Though many barriers to recognition are difficult to overcome, assistance in identifying primary care patients with anxiety is available. Screening measures have been designed specifically to aid those who are not mental health specialists in the detection of anxiety problems. One such instrument is the Primary Care Evaluation of Mental Disorders (PRIME-MD).²⁸ This measure consists of a 1-page questionnaire completed by the patients and a brief clinical evaluation. It has good validity and takes just a few minutes of the clinician's time to complete. Another option is the Goldberg Anxiety and Depression scales.²⁹ The anxiety scale consists of only 9 questions. The first 4 are asked of all patients, the remaining 5 are asked only if at least 1 of the first 4 is endorsed. According to the authors, patients with 5 “yes” responses have a 50% chance of having a clinically significant anxiety problem and those with more positive responses have even greater probability. The Hospital Anxiety and Depression Scale (HADS)³⁰ is a self-report measure consisting of just 14 items, and designed to assess symptoms in medically ill individuals. Though it does not provide a potential diagnosis, it does give an idea of overall level of anxiety. Those patients who score high on this scale can then be targeted for further assessment. When uncertain about the presence of an anxiety disorder, a referral should be made to a mental health specialist.

TREATMENT

In part due to underrecognition, anxiety disorders are undertreated in primary care patients. In the PCAP we found that approximately 50% of primary care patients with an anxiety disorder were not receiving any mental health treatment.³¹ Underrecognition is only one barrier to treatment, however. Additionally, many patients with a recognized anxiety disorder may be reluctant to accept treatment or a referral. In PCAP, we interviewed a sample of primary care patients with anxiety disorders who were not receiving treatment. The most common reasons given for not receiving pharmacotherapy were: (1) lack of physician recommendation; (2) not believing in taking medications; and (3) not recognizing that they had a treatable disorder.³¹ Similarly, those who were not receiving psychosocial treatments reported that the most common reasons were: (1) not believing in psychotherapy; (2) not recognizing that they had a treatable disorder; and (3) not having therapy recommended by their physician.³² Clearly, as has already been addressed,

ANXIETY DISORDERS IN PRIMARY CARE

one implication of the data is that there is a need for increased recognition of anxiety disorders in the primary care setting. However, the fact that many in our sample had concerns about side effects or “did not believe” in medications or therapy suggests an additional need for a clinician-patient dialogue aimed at dispelling misconceptions about treatment.

Despite the fact that anxiety disorders continue to be an underrecognized and undertreated phenomenon in the primary care setting, efficacious treatments do exist for these disorders. Some of these treatments may be possible within primary care; others will likely require a referral to mental health specialist.

Pharmacotherapy. Treatment with pharmacological agents such as benzodiazepines, monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs), and serotonin-norepinephrine reuptake inhibitor (SNRI) venlafaxine has been shown in a number of studies to be efficacious for anxiety disorders.³³⁻³⁶ Traditionally, benzodiazepines have been a staple in the treatment of anxiety disorders. These agents have the advantage of a rapid onset of effect and can be used on an as-needed (prn) basis for situational anxiety. However, they are commonly associated with such side effects as sedation, impaired coordination, dizziness, and headache. This class of medications is also more likely to cause physiological dependence and withdrawal effects (including rebound anxiety) upon discontinuation. Therefore, these agents should be avoided in patients with known or suspected substance abuse and medical supervision should be provided for discontinuation of these agents. Controlled treatment trials of benzodiazepines for anxiety disorders (other than PTSD³⁷) show high efficacy in acute treatment phases; however, it appears that many of those treated remain at least somewhat symptomatic over follow-up or remit when the medication is discontinued.³⁸⁻⁴⁰

Although there is considerable evidence attesting to the efficacy of TCAs for panic disorder, PTSD, and GAD, in general, these agents have been relegated to second-line treatments due to their poor side effect profile relative to the SSRIs.³⁶ The one exception is OCD, where clomipramine, a TCA that also inhibits serotonin uptake, is still considered a first-line treatment.⁴¹ MAOIs have demonstrated efficacy for OCD and social phobia,^{38,42} however, the utility of these agents is limited by their need for dietary proscriptions.

SSRIs and the SNRI venlafaxine have become the first-line treatment for anxiety disorders due to their safety and tolerability. In panic disorder, members of the SSRI class have been shown to reduce panic attack

frequency to 0 in 36% to 86% of patients.⁴³ Similarly, controlled studies have established the efficacy of SSRIs in PTSD,⁴⁴ OCD,⁴⁵ social phobia,⁴⁶ and GAD.⁴⁷ Many of the SSRIs have garnered Food and Drug Administration (FDA) indications for the treatment of individual anxiety disorders (see Table). In general, the SSRIs have a more favorable side effect profile than the TCAs and MAOIs, which means that they can be administered over long-term periods with fewer concerns about patient compliance. Moreover, their antidepressant effects are an added benefit given the high rates of comorbid mood disturbances in patients with anxiety disorders. However, these agents are often still associated with side effects such as insomnia, agitation, weight gain, and sexual dysfunction, all of which may necessitate switching to an alternative SSRI or augmentation with another agent. In addition, there have been a number of case reports of symptoms associated with discontinuation from the SSRIs, most commonly dizziness, nausea or emesis, fatigue, headache, gait instability, and insomnia.⁴⁸ In rare cases, these symptoms have necessitated reinstatement of the drug. Thus, discontinuation of the SSRIs should be achieved via slow taper and under medical supervision. In addition, some recent studies have suggested that cognitive-behavioral therapy (CBT), which has been found to be useful in helping individuals discontinue benzodiazepines,⁴⁹ may also be beneficial in aiding the discontinuation of SSRIs.⁵⁰

Psychosocial Treatment. Many patients express a preference for nonpharmacological treatments for their anxiety disorders due to fears about the real or perceived risks of taking a medication. In one study of 259 primary care patients, 60% indicated psychological treatment (CBT) as their first choice of treatment for an anxiety problem, whereas 31% indicated medication as their first choice, and 9% did not state a preference.⁵¹ Because patient preferences and expectations regarding treatment have the potential to influence the patient's outcome, it is important for the clinician to engage in a frank discussion with the patient about such issues.

Of the psychosocial treatment options for the anxiety disorders, CBT is currently considered to be the gold-standard. In 1995, a task force was formed by the American Psychological Association, with the aim of evaluating the status of empirical support for psychological interventions. Their reports suggest that CBT has garnered more empirical support than any other psychosocial treatment for anxiety disorders.⁵² The overall goal of CBT is to alter the maladaptive cognitions and behaviors that underlie and serve to maintain the patient's primary fear. Generally, this is

SSRI/SNRI INDICATIONS, WITH STARTING AND MAXIMUM RECOMMENDED DOSAGES, FOR THE TREATMENT OF ANXIETY DISORDERS (AS OF MARCH 2003)

SSRI/SNRI	ANXIETY DISORDER				
	OCD	PD/PDA	PTSD	SP	GAD
PAROXETINE	20-60 MG/DAY	10-60 MG/DAY	20-50 MG/DAY	20-60 MG/DAY	20 MG/DAY
SERTRALINE	50-200 MG/DAY	25-200 MG/DAY	50-200 MG/DAY	25-200 MG/DAY	
FLUOXETINE	20-80 MG/DAY	10-60 MG/DAY			
FLUVOXAMINE	50-300 MG/DAY				
VENLAFAXINE				75-225 MG/DAY	75-225 MG/DAY

SSRI=selective serotonin reuptake inhibitor; SNRI= serotonin-norepinephrine reuptake inhibitor; OCD=obsessive-compulsive disorder; PD/PDA=panic disorder/panic disorder with agoraphobia; PTSD=posttraumatic stress disorder; SP=social phobia; GAD=generalized anxiety disorder.

Weisberg RB and Maki KM. *Mental Fitness*. Vol 2, No 4. 2003.

58

WEISBERG
AND MAKI

achieved both through verbal discourse aimed at challenging the patient's misperceptions of reality and behavioral exercises prompting the patient to confront a feared object, situation, thought, or bodily sensation. Although the specific aims of CBT may vary with respect to its application to the individual anxiety disorders, the underlying theory regarding its efficacy and its repertoire of techniques is essentially the same.

In the case of panic disorder, a crucial component of CBT is exposure to feared interoceptive cues (bodily sensations) experienced during an attack (eg, shortness of breath, dizziness, or rapid heart rate). Panic Control Treatment, a multi-component treatment that incorporates interoceptive exposure, cognitive restructuring, and breathing retraining, has considerable data attesting to its effectiveness for panic disorder with and without agoraphobia.^{53,54}

From a cognitive-behavioral standpoint, GAD is conceptualized as a disorder of excessive worry that manifests itself in cognitive, behavioral, and physiologic domains.⁵⁵ Treatment of GAD involves identifying and challenging anxious thoughts and improving self-efficacy by generating adaptive alternatives to worry and testing these alternatives with behavioral exercises. Some CBT treatments for GAD also include an applied relaxation component consisting of progressive muscle relaxation and

breathing retraining. Both versions have been proven superior to a credible control treatment in reducing symptoms of anxiety and depression.^{56,57}

Exposure with response prevention (ERP) is the psychosocial treatment of choice for obsessive-compulsive disorder.⁵⁸ During ERP, the patient is exposed to a situation that triggers obsessive thoughts, while being prevented from engaging the ritualistic response, or compulsion, that is thought to maintain the obsessions. For example, a patient with concerns about contamination from germs might be asked to touch the inside of a trash can without performing the hand-washing ritual that reduces his/her anxiety. With repeated exposure and response prevention, a process of habituation occurs, wherein once feared activities lose their ability to elicit anxiety for the patient.

In the treatment of PTSD, both exposure therapy⁵⁹ and stress inoculation training (SIT)⁶⁰ produce beneficial results. In exposure therapy, confrontation of the trauma material may be in the form of evoking memories of the traumatic event by having the patient imagine he/she is in the trauma situation, or through in vivo exposure to people, places, or objects associated with the trauma. SIT is a treatment package consisting of relaxation techniques, cognitive restructuring, and exposure to trauma-related cues, but not the trauma memories themselves.

ANXIETY DISORDERS IN PRIMARY CARE

There is also evidence to suggest that CBT approaches both with and without the cognitive restructuring component are effective for social phobia.^{61,62} In social phobia, the goal of CBT is to challenge the patient's belief in his/her inability to perform effectively in social situations both through cognitive restructuring and practical exposure to feared situations. CBT for social phobia is frequently provided in a group format, which allows a ready-made audience and role players to complete exposure exercises in-session.⁶³

Most CBT consists of 10-14 sessions, lasting at least 50 minutes each. Further, specialized training is needed in the conduct of these therapies. Therefore, this treatment will typically require a referral to a specialist outside of the primary care office. Though CBT has evidence of its efficacy in anxiety disorders, all mental health providers do not utilize this type of treatment. The Association for Advancement of Behavior Therapy is a useful resource for finding a therapist who specializes in CBT.

A full course of CBT conducted by an expert therapist is the ideal recommendation for anxious primary care patients seeking non-medication treatment options or requiring adjunctive treatment. However, this is not always possible. As discussed above, many patients are reluctant to enter treatment and to accept a referral to a mental health specialist. One option for these patients is bibliotherapy, which has some empirical support for its ability to reduce anxiety symptoms.^{64,65} A number of self-help manuals, based on cognitive-behavioral techniques, are readily available.⁶⁶⁻⁶⁹ In addition to providing information to assist the patient in self-help, these manuals may also help to increase patients' comfort with therapeutic techniques and ready them for acceptance of a mental health referral.

Increasing Accessibility and Adherence to Treatment. Unfortunately, a scarcity of time and resources often precludes the comprehensive assessment and treatment of mental health concerns in the primary care setting. When mental health difficulties are identified in this setting, many patients are noncompliant with treatment delivered by the primary care provider or fail to follow through with referrals to outside mental health specialists. However, recent years have seen the emergence of innovative collaborative care models that are specifically designed to address these barriers to successful mental health treatment. In these models, primary care physicians and mental health providers work in tandem to provide and closely monitor adherence to treatment. Such models have been tested for depression and anxiety and have been

found to increase adherence to treatment and improve symptomatic outcome.^{70,71}

CONCLUSION

Identifying and treating anxiety disorders in primary care patients is of critical importance due to the high prevalence of these problems and the significant associated impairment. In many ways, primary care is the ideal setting in which to identify and assist patients in need of this help. Patients with anxiety disorders are more likely to present to primary care providers than mental health specialists and primary care providers often have an established history and trusting relationship with the patient. However, a great number of obstacles exist in the recognition and treatment of anxiety in primary care. Perhaps the greatest of these obstacles is the one that is least easily overcome—the fact that so little time is allotted for each primary care visit. Fortunately, brief assessment measures have been developed with the goal of quickly identifying anxiety disorders. Also fortunate is the fact that highly efficacious treatments for anxiety disorders are available. Pharmacotherapy can often be carried out by the primary care provider. CBT will typically require a referral to an expert provider. For patients reluctant to accept such a referral, bibliotherapy may be a good initial option. The best strategy for treatment may be close collaboration between primary care and mental health providers. Some practices are integrated, with providers of both disciplines working under the same roof. Unfortunately, this situation is rare. Therefore, primary care providers should work to establish a few close relationships with mental health providers in their community, who may accept referrals and provide consultation. **MF**

REFERENCES

1. Kessler RC, McGonagle KA, Shyang Z, et al. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Survey. *Arch Gen Psychiatry.* 1994;51:8-19.
2. Regier D, Myers J, Kramer M, et al. The NIMH Epidemiologic Catchment Area program. Historical context, major objectives, study population characteristics. *Arch Gen Psychiatry.* 1984;41:934-941.
3. Nisenson LG, Pepper CM, Schwenk TL, Coyne JC. The nature and prevalence of anxiety disorders in primary care. *Gen Hosp Psychiatry.* 1998;20:21-28.
4. Weiller E, Bissere J, Maier W, Lecrubier Y. Prevalence and recognition of anxiety syndromes in five European primary care settings. *Br J Psychiatry.* 1998;173(suppl 34):18-23.
5. Schurman R, Kramer P, Mitchell J. The hidden mental health network: treatment of mental illness by nonpsychiatric physicians. *Arch Gen Psychiatry.* 1985;42:89-94.

6. Beardsley RS, Gardocki GJ, Larson DB, Hidalgo J. Prescribing of psychotropic medication by primary care physicians and psychiatrists. *Arch Gen Psychiatry*. 1988;45:1117-1119.
7. van den Brink W, Leenstra A, Ormel J, van de Willige G. Mental health intervention programs in primary care: their scientific basis. *J Affect Disord*. 1991;21(4):273-284.
8. Bland RC, Newman SC, Orn H. Help-seeking for psychiatric disorders. *Can J Psychiatry*. 1997;42:935-942.
9. Harman JS, Rollman BL, Hanusa BH, Lenze EJ, Shear MK. Physician office visits of adults for anxiety disorders in the United States, 1985-1998. *J Gen Intern Med*. 2002;17:165-172.
10. Leon AC, Olfson M, Portera L. Service utilization and expenditures for the treatment of panic disorder. *Gen Hosp Psychiatry*. 1997;19(2):82-88.
11. Young AS, Klap R, Sherbourne CD, Wells KB. The quality of care for depressive and anxiety disorders in the United States. *Arch Gen Psychiatry*. 2001;58:55-61.
12. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. Fourth edition: *DSM-IV*. Washington, DC; 1994.
13. Greenberg P, Sisitsky T, Kessler R, Finkelstein S, Berndt E, Davidson J, et al. The economic burden of anxiety disorders in the 1990s. *J Clin Psychiatry*. 1999;60:427-435.
14. Olfson M, Fireman B, Weissman MM, Leon AC, Sheehan DV, Kathol RG, et al. Mental disorders and disability among patients in a primary care group practice. *Am J Psychiatry*. 1997;154(12):1734-1740.
15. Wittchen HU, Kessler RC, Beesdo K, Krause P, Hofler M, Hoyer J. Generalized anxiety and depression in primary care: prevalence, recognition, and management. *J Clin Psychiatry*. 2002;63(suppl 8):24-34.
16. Hansen MS, Fink P, Frydenberg M, Oxhøj ML. Use of health services, mental illness, and self-rated disability and health in medical inpatients. *Psychosom Med*. 2002;64(4):668-675.
17. Kennedy BL, Schwab JJ. Utilization of medical specialists by anxiety disorder patients. *Psychosomatics*. 1997;38(2):109-112.
18. Goodwin R, Olfson M, Feder A, Fuentes M, Pilowsky DJ, Weissman MM. Panic and suicidal ideation in primary care. *Depress Anxiety*. 2001;14(4):244-246.
19. Kessler RC, Borges G, Walters EE. Prevalence and risk factors of lifetime suicide attempts in the National Comorbidity Survey. *Arch Gen Psychiatry*. 1999;56(7):617-626.
20. Kirmayer L, Robbins J, Dworkind M, Yaffe M. Somatization and the recognition of depression and anxiety in primary care. *Am J Psychiatry*. 1993;150:734-741.
21. Kessler D, Lloyd K, Lewis G, Gray DP. Cross sectional study of symptom attribution and recognition of depression and anxiety in primary care. *BMJ*. 1999;318(7181):436-439.
22. Katon W. Panic disorder and somatization: A review of 55 cases. *Am J Medicine*. 1984;77:101-106.
23. Rodriguez BF, Weisberg RB, Machan JT, Culpepper L, Keller MB. Comorbidity in anxiety disorder patients seen in general medical practices. Paper presented at: The Annual Meeting of the Anxiety Disorders Association of America, 2002; Austin, TX.
24. Weisberg RB, Bruce SE, Machan J, Dolan RT, Culpepper L, Keller MB. Non-psychiatric medical illness in primary care patients with trauma histories and posttraumatic stress disorder. *Psychiatric Services*. 2002;53:848-854.
25. White K, Barlow DH. Panic disorder and agoraphobia. In: Barlow DH, editor. *Anxiety and its disorders: the nature and treatment of anxiety and panic*. 2nd ed. New York: Guilford Press; 2001.
26. Roca R. Anxiety. In: Barker L, Burton J, Zieve P, editors. *Principles of Ambulatory Medicine*. 3rd ed. Baltimore, MD: Williams & Wilkins; 1991.
27. Barlow DH, Allen LB, Choate ML. All for one and one for all: Treating anxiety and related disorders with a single, unified protocol. Paper presented at: The Annual Meeting of the Association for Advancement Behavior Therapy, 2002; Reno, NV.
28. Spitzer R, Williams J, Kroenke K, et al. Utility of a new procedure for diagnosing mental disorders in primary care: the PRIME-MD 1000 study. *JAMA*. 1994;272:1749-1756.
29. Goldberg D, Bridges K, Duncan-Jones P, Grayson D. Detecting anxiety and depression in general medical settings. *BMJ*. 1988;297:897-890.
30. Zigmond A, Snaith R. The Hospital Anxiety and Depression Scale. *Acta Psychiatr Scand*. 1983;67:361-370.
31. Weisberg RB, Haisley E, Culpepper L, Keller MB. Psychiatric treatment in primary care patients with anxiety disorders. Paper presented at: The Annual Meeting of the North American Primary Care Research Group, 2001; Nova Scotia, Canada.
32. Weisberg RB, Culpepper L, Keller MB. The underutilization of cognitive-behavioral therapy techniques in a sample of primary care patients with anxiety disorders. Paper presented at: The Annual Meeting of the Association for Clinical Psychosocial Research, 2001; Portland, ME.
33. Asnis GM, Hameedi FA, Goddard AW, et al. Fluvoxamine in the treatment of panic disorder: a multi-center double-blind placebo-controlled study in outpatients. *Psychiatry Res*. 2001;103:1-14.
34. Bourin M, Lambert O. Pharmacotherapy of anxiety disorders. *Human Psychopharmacol*. 2002;17:383-400.
35. van der Linden GJ, Stein DJ, van Balkom AJ. The efficacy of the selective serotonin reuptake inhibitors for social anxiety disorder: a meta-analysis of randomized controlled trials. *Int Clin Psychopharmacol*. 2000;15(Suppl 2):515-523.
36. Zohar J, Westenberg HG. Anxiety disorders: A review of the tricyclic antidepressants and selective serotonin reuptake inhibitors. *Acta Psychiatr Scand*. 2000;(suppl 403):39-49.
37. Braun P, Greenberg D, Dasberg H, Lerer B. Core symptoms of PTSD unimproved by alprazolam treatment. *J Clin Psychiatry*. 1990;51:236-238.
38. Gelernter CS, Uhde TW, Cimbliec P, et al. Cognitive-behavioral and pharmacologic treatments of social phobia: A controlled study. *Arch Gen Psychiatry*. 1991;48:938-945.
39. Pollack MH, Otto MW, Tesar GE, Cohen LS, Meltzer-Brody SM, Rosenbaum JF. Long-term outcome after acute treatment with clonazepam and alprazolam for panic disorder. *Psychiatric Annals*. 1993;13:257-263.
40. Shader RI, Greenblatt DJ. Use of benzodiazepines in anxiety disorders. *NEJM*. 1993;328:1398-1405.
41. Ackerman DL, Greenland S. Multivariate meta-analysis of controlled drug studies for obsessive compulsive disorder. *J Clin Psychopharmacol*. 2002;22:309-317.
42. Vallejo J, Olivares J, Marcos T, Bulbena A, Menchon J. Clomipramine versus phenelzine in obsessive-compulsive disorder: A controlled trial. *Brit J Psychiatry*. 1992;161:665-670.
43. Kasper S, Resinger E. Panic disorder: the place of benzodiazepines and serotonin reuptake inhibitors. *European Neuropsychopharmacol*. 2001;11:307-321.
44. Davidson JR, Rothbaum BO, Van der Kolk BA, Sikes CR, Farfel GM. Multi-center, double-blind comparison of sertraline and placebo in the treatment of posttraumatic stress disorder. *Arch Gen Psychiatry*. 2001;58:485-492.
45. Kronig MH, Apter J, Asnis G, et al. Placebo-controlled, multi-center study of sertraline treatment for obsessive compulsive disorder. *J Clin Psychopharmacol*. 1999;19:172-176.
46. Stein DJ, Stein MB, Goodwin W, Kumar R, Hunter B. The selective serotonin reuptake inhibitor paroxetine is effective in more generalized and in less generalized social anxiety disorder. *Psychopharmacol (Berl)*. 2001;158:267-272.
47. Montgomery SA, Mahe V, Handiquet V, Hackett D. The short-term and long-term treatment of generalized anxiety disorder: Results of a survival analysis. *J Clin Psychopharmacol*. 2002;22:561-567.
48. Black K, Shea C, Dursun S, Kutcher S. Selective serotonin reuptake inhibitor discontinuation syndrome: Proposed diagnostic criteria. *J Psychiatry and Neurosci*. 2000;25:255-261.
49. Otto M, Pollack M, Sachs G, Reiter S, Meltzer-Brody S, Rosenbaum J. Discontinuation of benzodiazepine treatment: Efficacy of cognitive-behavioral therapy for patients with panic disorder. *Am J Psychiatry*. 1993;150:1485-1490.

60

WEISBERG
AND MAKI

ANXIETY DISORDERS IN PRIMARY CARE

50. Whittal M, Otto M, Hong J. Cognitive behavior therapy for discontinuation of SSRI treatment of panic disorder. *Behav Res Ther.* 2001;39:939-945.
51. Walker JR, Katz A, Sexton K, Afifi T, Kjernisted KD. A survey of preference for pharmacological and psychological treatment for anxiety problems in a primary care setting. Paper presented at: The Meeting of the World Congress for Behavioral and Cognitive Therapy, 2001; Vancouver, Canada.
52. Chambless DL, Baker MJ, Baucom DH, et al. Update on empirically validated therapies, II. *The Clinical Psychologist.* 1998;51(1):3-16.
53. Craske M, Brown T, Barlow D. Behavioral treatment of panic: A two year follow-up. *Behav Ther.* 1991;22:289-304.
54. Klosko JS, Barlow DH, Tassinari R, Cerny JA. A comparison of alprazolam and behavior therapy in the treatment of panic disorder. *J Consult Clin Psychol.* 1990;58:77-84.
55. Barlow DH. The nature and origins of panic and anxiety: new developments. Paper presented at: Annual Convention of the Association for Advancement of Behavior Therapy, 1998; Washington, DC.
56. Borkevec TD, Costello E. Efficacy of applied relaxation and cognitive-behavioral therapy in the treatment of generalized anxiety disorder. *J Consult Clin Psychol.* 1993;61:611-619.
57. Butler G, Fennell M, Robson P, Gelder M. Comparison of behavior therapy and cognitive behavior therapy in the treatment of generalized anxiety disorder. *J Consult Clin Psychol.* 1991;59:167-175.
58. van Balkom AJ, van Oppen P, Vermeulen AWA, Nauta NCE, Vorst HCM, van Dyck R. A meta-analysis on the treatment of obsessive compulsive disorder: A comparison of antidepressants, behaviour and cognitive therapy. *Clin Psychol Rev.* 1994;14:359-381.
59. Foa EB, Rothbaum BO, Riggs DS, Murdock TB. Treatment of post-traumatic stress disorder in rape victims: A comparison between cognitive-behavioral procedures and counseling. *J Consult Clin Psychol.* 1991;59:715-723.
60. Veronen LJ, Kilpatrick DG. Stress reduction and prevention. In: Meichenbaum D, Jaremko ME, eds. *Stress Management for Rape Victims.* New York: Plenum Press; 1983.
61. Feske U, Chambless DL. Cognitive behavioral versus exposure only treatment for social phobia: A meta-analysis. *Behav Ther.* 1995;26:695-720.
62. Mattick R, Peters L. Treatment of severe social phobia: Effects of guided exposure with and without cognitive restructuring. *J Consult Clin Psychol.* 1988;56:251-260.
63. Heimberg RG, Barlow DH. New developments in cognitive-behavioral therapy for social phobia. *J Clin Psychiatry.* 1991;52(11, suppl.):21-30.
64. Bower P, Richards D, Lovell K. The clinical and cost-effectiveness of self-help treatments for anxiety and depressive disorders in primary care: a systematic review. *Br J Gen Pract.* 2001;51:838-845.
65. Lidren D, Watkins P, Gould R, Clum G, Asterino M, Tulloch H. A comparison of bibliotherapy and group therapy in the treatment of panic disorder. *J Consult Clin Psychol.* 1994;62:865-869.
66. Antony M, Swinson R. *Shyness and Social Anxiety Workbook: Proven Techniques for Overcoming Your Fears.* Oakland, CA: New Harbinger Publications; 2000.
67. Bourne E. *The Anxiety and Phobia Workbook.* Oakland, CA: New Harbinger Publications; 2000.
68. Craske M, Barlow D. *Mastery of Your Anxiety and Panic (MAP-3)-Client Workbook.* 3rd ed. San Antonio, TX: The Psychological Corp.; 2000.
69. Foa E, Wilson R. *Stop Obsessing: How to Overcome Your Obsessions and Compulsions.* New York, NY: Bantam Books Inc.; 2001.
70. Katon W, von Korff M, Lin E, et al. Collaborative management to achieve treatment guidelines. *JAMA.* 1995;273:1026-1031.
71. Roy Byrne PP, Katon W, Cowley DS, Russo J. A randomized effectiveness trial of collaborative care for patients with panic disorder in primary care. *Arch Gen Psychiatry.* 2001;58(9):869-876.