

# Posttraumatic Stress Disorder in Primary Care

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**BACKGROUND.** Primary care providers are aware of the importance of identifying depression and anxiety in their patients. The diagnosis of posttraumatic stress disorder (PTSD), however, is less of a priority.

**METHODS.** Primary care physicians and nurse practitioners in an outpatient facility of a large health maintenance organization administered a psychiatric screening questionnaire to patients whom they suspected had depression or anxiety. Patients with positive results were referred for immediate consultation with a clinical psychologist.

**RESULTS.** One hundred fourteen (38.6%) of the 296 patients referred for consultation met *Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition)* diagnostic criteria for PTSD. The most frequent traumas associated with PTSD were adult domestic violence and childhood abuse. Patients with a diagnosis of PTSD were frequent users of medical services in the 12 months before diagnosis. The majority of patients sought treatment in primary care settings, not mental health settings.

**CONCLUSIONS.** Patients with PTSD often visit outpatient primary care settings. Medical providers may identify symptoms of depression or anxiety but may not recognize PTSD because of the high degree of overlap between these conditions, and the lack of familiarity with PTSD diagnostic criteria. We provide screening questions that may help physicians detect PTSD in their practices.

**KEY WORDS.** Stress disorders, posttraumatic; primary health care; health maintenance organizations. (*J Fam Pract* 1999; 48:222-227)

Posttraumatic stress disorder (PTSD) is an anxiety disorder characterized by chronic symptoms in response to traumatic events that elicited intense feelings of fear, helplessness, or horror (Table 1). Symptoms include repeated intrusive recollections, nightmares, flashbacks, avoidance of disturbing stimuli, emotional numbing, and disturbances of attention and arousal.<sup>1</sup> PTSD is often cyclic and progressive in nature. Recent studies have examined the prevalence and impact of PTSD on persons in noncombat settings.<sup>2,10</sup>

Twenty percent of adults exposed to a traumatic event manifest symptoms of PTSD.<sup>10</sup> National studies of random community samples found 7.8% to 9% of subjects met revised *Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition)* (DSM-IV) criteria for PTSD.<sup>1,2,4,5</sup> In selected populations, such as those that have experienced family violence, urban violence, combat, natural disasters, motor vehicle accidents, or rape, the prevalence of PTSD has been reported as high as 51%.<sup>4,7,8,10,12,21,33-35</sup> Female gender, prolonged childhood separation from a parent, and family history of depression, anxiety, or antisocial behavior increase susceptibility to PTSD.<sup>2,4,7,8</sup>

Medical service utilization increases after a traumatic event.<sup>9</sup> Patients with PTSD have more somatic complaints

than other patients, especially musculoskeletal, gastrointestinal, cardiovascular, neurological, and gynecological symptoms,<sup>4,11-18</sup> and they exhibit poorer general health and greater functional impairment.<sup>18,22</sup>

Identifying patients with PTSD in primary care patients can be challenging. These patients typically seek treatment for specific physical complaints and often fail to recognize the connection between their past trauma and present symptoms.<sup>13,26,32</sup> There is much symptom overlap between PTSD and other psychiatric disorders.<sup>2,11,15</sup> One national study found a lifetime history of at least one other psychiatric disorder in 88.3% of men and 79% of women with PTSD.<sup>2</sup> Depression, anxiety, substance abuse, and personality disorders have comorbidity rates with PTSD ranging from 62% to 92%.<sup>2,4,14,15,17,18,23,24</sup> Primary care providers (PCPs) may identify symptoms of depression or anxiety and treat them with medication without diagnosing and specifically treating PTSD. Recent research suggests these patients require medication and psychotherapy specifically focused on the past trauma.<sup>19,20,25,26</sup>

Our data were collected during a project evaluating a treatment model in which primary care physicians and nurse practitioners worked collaboratively with on-site psychologists. The primary goal of the project was detection and treatment of depression and anxiety disorders, but we discovered many patients met DSM-IV diagnostic criteria for PTSD. Our study describes those patients and their trauma histories, chief complaints, medical services utilization, and psychiatric histories.

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## METHODS

The study setting was a suburban outpatient primary care facility in a large group model health maintenance organization (HMO) in the Denver, Colorado, area. Data were collected from October 1996 through July 1997. All providers in the facility, including 6 physicians and 4 nurse

practitioners, participated in the study. The sample was drawn from 7444 patients visiting the facility during the study period. Medical providers administered a computerized psychiatric screening questionnaire to patients with symptoms of depression or anxiety. Patients with positive screening results were referred to an on-site psychologist who administered a semistructured clinical interview.

TABLE 1

### DSM-IV Criteria for 309.81 Post-Traumatic Stress Disorder

**A.** The person has been exposed to a traumatic event in which both of the following were present:

(1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others.

(2) the person's response involved intense fear, helplessness, or horror.

Note: In children, this may be expressed instead by disorganized or agitated behavior.

**B.** The traumatic event is persistently reexperienced in 1 (or more) of the following ways:

(1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.

(2) recurrent distressing dreams of the event. Note: In children, there may be frightening dreams without recognizable content.

(3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). Note: In young children, trauma-specific reenactment may occur.

(4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.

(5) physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.

**C.** Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by 3 (or more) of the following:

(1) efforts to avoid thoughts, feelings, or conversations associated with the trauma

(2) efforts to avoid activities, places, or people that arouse recollections of the trauma

(3) inability to recall an important aspect of the trauma

(4) markedly diminished interest or participation in significant activities

(5) feeling of detachment or estrangement from others

(6) restricted range of affect (eg, unable to have loving feelings)

(7) sense of a foreshortened future (eg, does not expect to have a career, marriage, children, or a normal life span)

**D.** Persistent symptoms of increased arousal (not present before the trauma), as indicated by 2 (or more) of the following:

(1) difficulty falling or staying asleep

(2) irritability or outbursts of anger

(3) difficulty concentrating

(4) hypervigilance

(5) exaggerated startle response

**E.** Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month

**F.** The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

#### Specify if:

Acute: if duration of symptoms is less than 3 months

Chronic: if duration of symptoms is 3 months or more

#### Specify if:

With delayed onset: if onset of symptoms is at least 6 months after the stressor

DSM-IV denotes *Diagnostic and Statistical Manual of Mental Disorders, 4th edition*. Adopted with permission from American Psychiatric Association. *Diagnostic and statistical manual of mental disorders, 4th ed.* Washington, DC: 1994.

TABLE 2

Comparison of Historical and Clinical Factors Between Patients with Posttraumatic Stress Disorder (N = 114) and Those with Other Psychiatric Disorders (N = 182)

Factor	PTSD n (%)	Other Psychiatric Disorders n (%)	Odds Ratio (CI)	P*
Trauma History				
Current domestic violence	24 (21.1)	8 (4.4)	5.80 (2.36, 14.68)	<.001
Psychiatric History				
Mental health treatment at HMO	29 (25.4)	25 (13.7)	2.14 (1.13, 4.06)	.011
Any mental health treatment	80 (70.2)	85 (46.7)	2.69 (1.59, 4.55)	<.001
Psychotropic medications	61 (53.5)	64 (35.2)	2.12 (1.28, 3.52)	.002
Psychiatric hospitalization	24 (21.1)	15 (8.2)	3.34 (1.62, 6.88)	.001
Suicide attempt	34 (29.8)	16 (8.8)	4.41 (2.20, 8.92)	<.001
Other Clinical Findings				
Current suicidal ideation	19 (16.7)	14 (7.7)	2.27 (1.02, 5.05)	.027
Current alcohol or substance abuse	14 (12.3)	8 (4.4)	3.04 (1.15, 8.25)	.012

\*Likelihood ratio chi-square.

PTSD denotes posttraumatic stress disorder; CI, confidence interval; HMO, health maintenance organization.

## MEASURES

### The Shedler Quick PsychoDiagnostics Panel.

(QPD) is a hand-held, computerized test with branching internal logic that screens for 7 psychiatric disorders using *DSM-IV* criteria. The disorders include major depression, dysthymia, generalized anxiety, panic, obsessive-compulsive disorder, bulimia nervosa, and alcohol and substance abuse. The QPD depression score correlates significantly with the Hamilton Depression Index ( $r = .87$ ), the Beck Depression Inventory ( $r = .80$ ), the Center for Epidemiologic Studies Depression Scale ( $r = .79$ ), and the Zung Depression Scale ( $r = .78$ ).<sup>27</sup> Sensitivity and specificity compared with the Structured Clinical Interview for *DSM-IV* (SCID-IV)<sup>28</sup> in 203 patients seen in our Mental Health Department were 79% and 97% for major depression, 79% and 90% for generalized anxiety disorder, 71% and 97% for panic disorder, and 69% and 96% for obsessive-compulsive disorder.<sup>27</sup>

**Semistructured Clinical Interviews.** During the medical visit, patients with positive screen results were introduced to 1 of 2 on-site psychologists. The majority of patients were interviewed immediately; those with time constraints were rescheduled within 1 week. No follow-up data were collected on patients with negative screening results.

Past and present medical problems were verified with the patient's medical record and computerized pharmacy profile. *DSM-IV*-based symptom checklists for major depression, dysthymia, generalized anxiety disorder, panic disorder, PTSD, obsessive-compulsive disorder, substance abuse, anorexia, and bulimia were administered. Although specific SCID modules were not used, the interview was designed to detect *DSM-IV* diagnostic criteria for each disorder. The interview lasted approximately 1 hour.

## RESULTS

Of 7444 patients, 296 (3.9%) were given the QPD, had positive results, were referred to an on-site psychologist, and completed the semistructured interview. There were 228 (77%) women and the mean age was 41.5 years (standard deviation = 14.40). Two hundred twenty-six (76.4%) were white, 33 (11.1%) African American, 29 (9.8%) Hispanic, 7 (2.4%) Asian or Pacific Islander, and 1 (0.3%) other. Nineteen (6.2%) had completed some high school or less, 78 (26.5%) were high school graduates, 120 (40.7%) had some college education, and 79 (26.5%) were college graduates or had received some postgraduate education. No significant differences were observed between patients with or without PTSD for these demographic variables.

### TRAUMA HISTORY

The actual number of discrete traumatic incidents was not assessed. However, a diverse range of traumatic experiences was identified, including child abuse, domestic violence, death of a friend or family member, accidents, and crime victimization. The majority of patients experienced traumas from more than one category, with child abuse (47.6%) and domestic violence (39.4%) the most frequently reported. Twenty-four PTSD patients (21.1%) and 8 non-PTSD patients (4.4%) reported an incident of domestic violence within the last year ( $P < .0001$ ) (Table 2).

### PSYCHIATRIC HISTORY

Of the 296 patients interviewed, 125 (43%) had 3 psychiatric disorders, 115 (40%) had 2 disorders, and 56 (19%) had a single psychiatric disorder. One hundred fourteen patients (38.5% of those screened; 1.5% of patients visiting the facility during the study period) met criteria for a cur-

rent episode of PTSD. Lifetime rates of psychiatric diagnoses were not assessed. PTSD patients reported significantly higher rates of previous mental health treatment ( $P < .0001$ ), psychotropic medication use ( $P = .002$ ), psychiatric hospitalizations ( $P = .001$ ), and suicide attempts ( $P < .001$ ) (Table 2). Nineteen (17.3%) PTSD patients compared with 14 (8.4%) non-PTSD patients reported suicidal ideation ( $P = .027$ ). Fourteen (12.3%) PTSD patients reported current alcohol or substance abuse, compared with 8 (4.4%) patients without PTSD ( $P = .012$ ).

### CHIEF COMPLAINTS

Musculoskeletal (11.6%), digestive (8.4%), neurologic (8.1%), chest pain (7.7%), gynecologic (7.0%), ear, nose, and throat (6.3%), cardiovascular (5.3%), and pulmonary (3.5%) symptoms were the most frequently reported chief complaints among patients in the study. Fewer patients reported psychiatric symptoms such as depression (6.3%), anxiety (6.0%), and stress (2.1%) as their chief complaint. The number and types of chief complaints did not differ significantly for patients with and without PTSD.

### MEDICAL SERVICES UTILIZATION DATA

Medical services utilization data for the sample were compiled from the computerized appointment system records. During the 12 months before study enrollment, utilization was high for both PTSD patients and patients with other psychiatric diagnoses. The average adult outpatient primary care visit rate for PTSD patients was 1.16 visits per month, compared with the HMO average of 0.21 (data obtained from standard utilization reports). Patients who had major depression without PTSD averaged 1.28 visits per month. The visit rates of PTSD patients did not differ significantly from those of patients with major depression without PTSD ( $P = .30$ ).

## DISCUSSION

Our results suggest that PTSD is often unrecognized among patients in primary care settings. A PCP may identify and treat depression or anxiety symptoms but not PTSD, perhaps because of a lack of knowledge about and experience with the condition. If PTSD remains undiagnosed and specific psychotherapy is not initiated, optimal response may not be achieved.<sup>19,20,25,26</sup> Time constraints may prevent a more thorough assessment for PTSD by PCPs, and preliminary evaluations may not specifically explore past traumatic events. Even if trauma is identified, PCPs might not connect noncombat trauma to PTSD. Similarly, PTSD patients in this sample did not initially connect past trauma to their present symptoms and instead frequently sought medical treatment for their perceived physical ailments.<sup>10</sup>

There are several potential explanations for patients and medical professionals not connecting past trauma to current physical symptoms.<sup>19,20,25,26,29</sup> There may be a long delay between the initial trauma and the onset of physical symptoms.<sup>30,31,32</sup> Some patients are resistant to the concept

that a past traumatic experience can contribute to their current physical complaints.<sup>26</sup> Finally, patients may not understand that the autonomic nervous system can remain activated after trauma as a protective mechanism, leading to long-term physical symptoms.<sup>33</sup>

Our patients' responses to inquiries about past trauma often depended on the phrasing of our questions. Many patients would deny a history of physical, sexual, or emotional abuse but would affirm past experiences of fearing for their life, their safety, or the life of another. Although patients commonly reported fleeing from verbal or physical assault by a parent or spouse, many did not label these experiences as abuse, possibly because of denial or a perceived stigma of the term.

Our data are consistent with findings from previous studies. Increased exposure to traumatic events, family history of antisocial behavior, and female gender have been associated with risk of developing chronic PTSD.<sup>4,7,8,22</sup> Medical services utilization increases after trauma exposure.<sup>6,10,13</sup> Finally, musculoskeletal, neurological, gastrointestinal, cardiovascular, and pelvic symptoms predominated in our PTSD patients, consistent with findings from earlier studies.<sup>13,25,26,31,32,34</sup>

### LIMITATIONS

Our study has several limitations. It was not designed to determine the prevalence of PTSD in a primary care HMO setting. The findings were unexpected and analyzed retrospectively. We did not determine the number of discrete traumatic events, or the main precipitant of PTSD in patients with multiple traumas. The QPD did not have a validated PTSD module and the psychologists did not use a standardized interview protocol; therefore, the false-positive and false-negative rates of PTSD diagnosis are unknown. The study was conducted at a single site, and the findings could represent an unusual clustering or adverse selection of patients. Therefore, similar studies should be performed in other primary care settings.

We did not conduct a general screening; therefore, our calculated prevalence is subject to biases of selective referral for screening, and the severity and trauma exposure of our sample may not reflect that of the general population. Furthermore, consistent with our positive screening result rate of 3.9%, since depression and anxiety are underdetected based solely on PCP suspicion,<sup>36,37</sup> it is possible that our calculated sample prevalence of PTSD underestimates the true primary care prevalence. Despite these limitations, the data suggest a need to more accurately measure the prevalence of PTSD in primary care and to measure the effect of improved detection on medical services utilization and treatment outcomes.

## CONCLUSIONS

Our findings suggest PTSD is often not recognized in primary care settings and PCPs should improve their awareness of PTSD. Patients reporting symptoms of depression or anxiety and patients with high medical services utiliza-

**TABLE 3**

**Suggested Screening Questions for Posttraumatic Stress Disorder**

- Have you ever encountered an event that was life-threatening to you or someone else?
- Have you ever encountered an event where you feared for your safety or the safety of someone else?
- Have you ever experienced an event that deeply frightened you and left you feeling shocked or helpless?
- Have you ever been physically, sexually, or emotionally abused?
- Have you ever been in a physically abusive relationship as an adult?

*If the response to any of the above questions is positive, also ask:*

- Do you have thoughts or images about the trauma that continue to bother you?
- Do you feel you do not care about things as much or feel numb as a result of the experience?
- Do you avoid certain people, places, or situations since the trauma?
- Do you feel stressed, hyper, on guard, anxious, or depressed as a result of the experience?
- Are you having more difficulty doing your job or getting along with coworkers?
- Have you had any trouble with the law?
- Do you feel more uncomfortable interacting with family or friends, or are you having more difficulty getting along with them?

tion rates are candidates for screening. We suggest clinicians ask the focused questions regarding past and present family trauma and threats to life or safety provided in Table 3. A positive response to 1 or more of the first 5 questions and a positive response to at least 1 question from the next group of questions should prompt mental health consultation for clarification of diagnosis and assistance in treatment. Appropriate medical and psychiatric treatment may reduce excessive medical services utilization and improve treatment outcomes.

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