

# The Link Between Substance Abuse and Posttraumatic Stress Disorder in Women

## A Research Review

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*Research has documented a high incidence of comorbid post-traumatic stress disorder (PTSD) and substance abuse. Women substance abusers, in particular, show high rates of this dual diagnosis (30% to 59%), most commonly deriving from a history of repetitive childhood physical and/or sexual assault. Rates for men are two to three times lower and typically stem from combat or crime trauma. Patients with both disorders are characterized by high severity on a multitude of psychological and treatment variables and use of the most severe drugs (cocaine and opioids). Treatment research on women is limited but suggests the possibility of retaining patients and achieving positive outcomes. (Am J Addict 1997; 6:273-283)*

In this article, existing literature is reviewed on women with posttraumatic stress disorder (PTSD) and substance use disorders. These studies have begun to provide an emerging understanding of the rates of co-occurrence of the disorders, the relationship between them, their frequent association with childhood physical and/or sexual abuse, differences from male samples, associated life problems, and treatment issues. (Unless otherwise noted, the term *substance abuse* will hereafter be used for

all substance use disorders, including substance dependence, as it is the term typically used in treatment settings.)

### Rates of Co-occurrence for PTSD and Substance Abuse

*Rates of PTSD in substance abuse samples.* Research on the association between PTSD and substance abuse began with studies of male combat veterans, typically in Veterans Administration (VA) settings.<sup>1</sup> In recent

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years, mixed-gender studies with a broader array of trauma patients have also begun to be studied. Reports of the latter type, using DSM-III-R criteria in substance abuse treatment samples, have estimated rates of current PTSD at 12%,<sup>2</sup> 20.5%,<sup>3</sup> 25%,<sup>4</sup> and 34%.<sup>5</sup>

For women in particular, rates are more than double, ranging from 30% to 59%, depending on the population surveyed. Specific studies are described in Table 1, all of which used DSM-III-R criteria to assess current diagnoses among patients in substance abuse treatment. It is notable that these studies all report higher rates of PTSD than the rate seen among women in the general population, which averages about 11% (Kessler et al.<sup>6</sup> report 10%; Breslau et al.<sup>7</sup> report 11%; Resnick et al.<sup>8</sup> report 12%, all lifetime rates). These findings suggest that women substance abusers are much more likely to have PTSD than are women in general. The results also reflect the common finding that treatment samples<sup>3,4,9,10</sup> tend to have higher rates of positive diagnoses than community samples.<sup>6</sup>

Studies estimating a lifetime history of trauma among women substance abusers, rather than the diagnosis of PTSD per se, are even more common and consistently indicate high rates of victimization ranging from 55% to 99%: Grice et al.,<sup>5</sup> 55%; Miller et al.,<sup>10</sup> 66%; Yandow,<sup>11</sup> 75%; Najavits et al.,<sup>3</sup> 85%; and Fullilove et al.,<sup>9</sup> 99%. Studies of women in the general population (without regard to substance abuse) estimate lifetime trauma rates of 36%<sup>8</sup> to 51%.<sup>6</sup> Here too, women in substance abuse treatment show higher trauma rates than women in the general population.

### *Rates of substance abuse in PTSD samples.*

Studies evaluating the rate of substance abuse in individuals with known PTSD also confirm a strong association between the two disorders. For example, in a general population study of 1,007 young urban adults, the lifetime rate of DSM-III-R substance use disorders was 43% among those

diagnosed with PTSD, compared with 24.7% for those without PTSD.<sup>7</sup> For women in particular, studies are described in Table 2 and also indicate higher rates of substance use disorders among women with PTSD than among women without PTSD.

### The Relationship Between PTSD and Substance Abuse

The syndromes of PTSD and substance abuse appear to be strongly linked.<sup>12</sup> For example, the presence of either disorder alone can increase the risk of developing the other disorder. Moreover, the disorders have consistently been found to co-occur across various types of traumas<sup>1</sup> and substances.<sup>13</sup> Studies indicate that substance users have a higher likelihood of subsequent traumatic events than nonusers, both in the general population<sup>14</sup> and among women specifically.<sup>15,16</sup>

Cocaine and opioids consistently show a higher association with trauma and the diagnosis of PTSD than do marijuana or alcohol (which are presumably "less severe" substances).<sup>2,5,14,17</sup> Even a family history of substance use problems is a significant risk factor for exposure to traumatic events.<sup>7</sup>

Conversely, the presence of trauma has been associated with the development of substance abuse,<sup>18,19</sup> this idea has been termed the traumatogenicity theory of substance use disorders<sup>20</sup> and may reflect an attempt to "self-medicate" the suffering experienced. Moreover, women who have been traumatized have a more rapid onset of substance abuse than women who have not been traumatized<sup>5</sup> and a higher rate of substance abuse even when family background variables are controlled.<sup>10</sup> Trauma and substance abuse may also be linked for many women in that perpetrators have been found to have used substances at the time of assault in a high percentage of domestic abuse (50%) and rape (39%) cases.<sup>21</sup>

The relationship between the two disorders also appears to be more enduring

**TABLE 1. Posttraumatic stress disorder (PTSD) among women with substance use disorder (SUD)\***

Studies	Sample	Measure to Diagnose SUD (system/time/frame)	Measure to Diagnose PTSD (system/time/frame)	Rate of PTSD in Women With SUD	Additional Findings
Brown et al. <sup>1</sup>	84 inpatients on detox unit (36 women)	Unspecified assessment (DSM-III-R <sup>49</sup> /current <sup>b</sup> )	Life Stressor Checklist and Mississippi Scale for PTSD (DSM-III-R <sup>49</sup> /current) <sup>b</sup>	43%	12% current PTSD among men; PTSD associated with higher rate of inpatient substance abuse treatment than non-PTSD
Cottler et al. <sup>14</sup>	2,663 in community sample (1,569 women)	Diagnostic Interview Schedule (DIS; DSM-III-R <sup>49</sup> /lifetime)	Substance use (not disorder) via the DIS (DSM-III-R <sup>49</sup> /lifetime)	See note. <sup>c</sup>	Female gender and use of cocaine/opiates were the only two risk factors that predicted the development of PTSD Rate of lifetime PTSD: 56.2%
Dansky et al. <sup>17</sup>	73 women on inpatient substance abuse unit	Clinical interview, urine screen, and/or Addiction Severity Index score (unspecified/current <sup>b</sup> )	Modified version of the DIS (DSM-III-R <sup>49</sup> /current)	42.5%	
Fullilove et al. <sup>9</sup>	105 women, outpatient inner-city substance abuse program	Two self-report questions <sup>d</sup> (unspecified/lifetime) <sup>e</sup>	Structured Clinical Interview for DSM-III-R <sup>49</sup> (SCID) PTSD Module (DSM-III-R <sup>49</sup> /lifetime)	59%	1) Of those with lifetime PTSD, 67% had current symptoms of PTSD; 2) 99% rate of lifetime trauma, with 87% rate of lifetime violent trauma
Najavits et al. <sup>41</sup>	128 cocaine-dependent outpatients (43 women)	SCID Substance Use Disorder and Alcohol Use Disorder Modules (DSM-III-R <sup>49</sup> /current)	Modified PTSD Symptom Scale-Revised and the Trauma History Questionnaire (DSM-III-R <sup>49</sup> /current)	30%	PTSD associated with greater severity on psychological, medical, motivational, diagnostic, and interpersonal variables than non-PTSD

\*Emphasis in both Tables 1 and 2 was on available studies that used DSM-III-R criteria. Interestingly, all studies in Table 1 sample women currently in treatment (except Cottler et al.<sup>14</sup>), whereas all studies in Table 2 were non-treatment-seeking samples (although studies were not selected on this basis).

<sup>b</sup>Presumed, not stated in article.

<sup>c</sup>This study is included because of its relevance to the topic. However, it did not provide actual rates for women, it did not evaluate substance use disorder per se, and it did not use DSM-III-R<sup>49</sup> criteria.

<sup>d</sup>Unspecified psychometric properties.

<sup>e</sup>Most women in this study (56%) were substance-free (on the basis of urinalysis) for 1 month before the study.

than for some other Axis I disorders (such as mood or anxiety disorders). Symptoms of the latter sometimes remit with abstinence or appear to be an artifact of substance use, withdrawal, or overlapping DSM-IV decision rules.<sup>13,22</sup> Indeed, PTSD symptoms are widely reported to become worse with initial abstinence,<sup>13,23-25</sup> perhaps because the use of substances no longer masks PTSD symptoms. Women with PTSD may thus be particularly vulnerable to substance use relapse.<sup>23-25</sup> From patients' perspectives, PTSD symptoms are a common trigger of substance use,<sup>4,26</sup> which, in turn, can heighten PTSD symptoms.<sup>13,24,25</sup>

*A common history of repeated childhood sexual and/or physical assault.* Various studies have found frequent histories of childhood physical and/or sexual assault among women with current substance abuse, ranging from 32% to 66%: 66% for sexual assault,<sup>10</sup> 42% for sexual assault and 32% for physical assault,<sup>9</sup> 61% for sexual assault,<sup>5</sup> 63% for physical or sexual assault,<sup>23</sup> and 46% for sexual assault and 58% for physical assault.<sup>3</sup> Moreover, if a woman experienced both physical and sexual abuse as a child, her likelihood of using illicit drugs was almost twice as high (44%) than if she had either type of abuse alone (23%).<sup>27</sup> The importance of childhood trauma is echoed by general epidemiological work, which has found that the vast majority of trauma to women occurs before age 18,<sup>28</sup> when victims often lack sufficient developmental and environmental resources with which to cope.

Women with substance abuse have also been found to have high rates of repeated trauma.<sup>3-5,9</sup> In both studies of women in an inner-city neighborhood<sup>9</sup> and a diverse outpatient sample of cocaine-addicted subjects,<sup>3</sup> the average number of lifetime traumas among women was five. Moreover, the likelihood of a PTSD diagnosis was increased in women exposed to a greater number of traumas and more violent traumas.<sup>9</sup>

TABLE 2. Substance use disorder (SUD) among women with posttraumatic stress disorder (PTSD)

Studies	Sample	Measure to		Rate of SUD in Women With PTSD	Additional Findings
		Diagnose PTSD (system/time frame)	Diagnose SUD (system/time frame)		
Breslau et al. <sup>46</sup>	801 women (all mothers)	Diagnostic Interview Schedule (DIS) (DSM-III-R <sup>49</sup> /lifetime)	DIS (DSM-III-R <sup>49</sup> /lifetime)	Any illicit drug use disorder: odds ratio = 3.11; alcohol use disorder: odds ratio = 3.12	Marijuana use disorder odds ratio = 3.49; cocaine use disorder odds ratio = 1.80 (NS); preexisting illicit drug use disorder predicted increased risk (hazard ratio = 2.1) for exposure to traumatic events (but not PTSD per se)

Helzer et al. <sup>47</sup>	2,493 in community sample (1,528 women)	DIS (DSM-III <sup>49</sup> /lifetime)	DIS (DSM-III <sup>48</sup> /unspecified)	Women with PTSD were 1.4 times more likely to have drug use disorder than women without PTSD and 2.8 times more likely to have alcohol use disorder	—
Kessler et al. <sup>6</sup>	5,877 in community sample (3,065 women)	Modified version of the DIS (DSM-III-R <sup>50</sup> /lifetime)	Modified Composite International Diagnostic Interview (DSM-III-R <sup>50</sup> /lifetime)	Alcohol use disorder in women, 27.9% (odds ratio = 2.48); drug use disorder in women, 26.9% (odds ratio = 4.46)	Alcohol use disorder, 13.5% for women without PTSD; drug use disorder, 7.6% for women without PTSD
Kilpatrick et al. <sup>34</sup>	3,400 women in community sample	National Women's Study PTSD Module (DSM-III-R <sup>50</sup> /past 6 months)	Unspecified measure of alcohol dependence (DSM-III-R <sup>50</sup> /current)	Women with current PTSD 5.52 times more likely to have alcohol dependence than women without PTSD	1) Women with lifetime PTSD 2.4 times more likely to have alcohol dependence than women without PTSD; 2) ↑ odds of alcohol dependence, ↑ physical/sexual assaults, ↑ 3) ↑ substance use, ↑ likelihood of subsequent violent assault
Kulka et al. <sup>48</sup>	1,600 Vietnam veterans (430 women)	Composite of multiple measures (DSM-III-R <sup>50</sup> /current and lifetime)	DIS (DSM-III-R <sup>50</sup> /current and lifetime)	13 of 42 women with current PTSD (30.5%) met lifetime criteria for SUD	—
Quimette et al., unpublished <sup>a</sup>	52 women Vietnam veterans	Clinician-administered PTSD scale (DSM-III-R <sup>50</sup> /lifetime)	SCID Alcohol Use Disorder Module (DSM-III-R <sup>50</sup> /lifetime) <sup>b</sup>	Of 25 women with lifetime PTSD, 48% also had lifetime alcohol use disorder	Women with PTSD and alcohol use disorder (vs. women with PTSD alone) had higher rates of sexual assault during both childhood and wartime, more PTSD symptoms, dissociation, and borderline personality disorder traits

<sup>a</sup>Quimette P, Wolfe J, Chrestman K: Characteristics of PTSD—alcohol abuse comorbidity in women (unpublished manuscript, 1997).

<sup>b</sup>In this study, patients with "active substance abuse" were ruled out.

### PTSD and Substance Abuse in Women vs. Men

Early research on PTSD and substance abuse focused almost exclusively on male combat veterans whose substance abuse arose in the context of war trauma.<sup>1</sup> In the past decade, research on women with PTSD and substance abuse has expanded; it indicates that women are different from men in their profile of PTSD and substance abuse in several important ways.

First, the combination of PTSD and substance abuse is much more common among women than men. In two studies above that separately compared women and men, women were found to have more than two to nearly four times the rate of PTSD: 43% for women vs. 12% for men,<sup>4</sup> and 30% for women vs. 15% for men.<sup>3</sup> In a major epidemiological study of substance users,<sup>14</sup> female gender was significantly associated with a diagnosis of PTSD among subjects exposed to traumatic events, whereas age, race, depression, and antisocial personality disorder were not.

Such results mirror the finding that, in general (not just in substance abuse samples), women are at much higher risk for PTSD than men. Epidemiological studies have found double the rate of PTSD in women than in men: 10.4% vs. 5%<sup>6</sup> and 11.3% vs. 6%.<sup>7</sup> Both of these studies also found that women were twice as likely to develop the syndrome of PTSD after exposure to a trauma than men; one study, for example, yielded a 30.7% rate among women and 14% among men.<sup>7</sup> This finding could suggest that women may have a particular vulnerability to PTSD or that the types of traumas women are exposed to may be more likely to result in PTSD. Whether women with PTSD and substance abuse have actually experienced more traumas than men is unclear, however. One study supports this hypothesis,<sup>5</sup> but others do not.<sup>3,4</sup>

Second, whereas women with PTSD

and substance abuse typically have a history of physical and/or sexual assault (as discussed above), men had significantly lower rates of these types of traumas<sup>3-5</sup> and significantly higher rates of crime victimization, general disaster, or combat exposure.<sup>3</sup> These results are consistent with a community study<sup>6</sup> in which men experienced more combat and witnessing of traumatic events, whereas women experienced more sexual assault. Female substance abusers have also been found to have significantly higher rates of repeated trauma and family perpetrators than male substance abusers.<sup>5</sup>

### Associated Life Problems for Women With PTSD and Substance Abuse

Several studies have compared patients with PTSD and substance abuse to patients with substance abuse alone.<sup>3,5,23</sup> These studies have consistently found that the former are more impaired. Specifically, they have more comorbid Axis I disorders,<sup>3,23</sup> particularly mood and anxiety disorders,<sup>3,13,23</sup> Axis II disorders,<sup>3</sup> medical problems,<sup>3</sup> psychological symptoms,<sup>3</sup> inpatient admissions,<sup>4</sup> and interpersonal problems;<sup>3</sup> and lower global level of functioning,<sup>3</sup> compliance with after-care,<sup>23</sup> and motivation for treatment.<sup>3</sup> Women with PTSD and substance abuse are also reported to have numerous co-occurring life problems, such as homelessness,<sup>29,30</sup> loss of custody of their children,<sup>31</sup> maltreatment of their children,<sup>32</sup> and "battered woman syndrome."<sup>33</sup>

In addition to such observable problems, the subjective experiences of women with PTSD and substance abuse can be devastating. An article by Fullilove et al.<sup>9</sup> provides a description of women crack-cocaine abusers in Harlem. They report intense stigmatization, blame for failure in maternal roles, frequent sex-for-drugs exchanges, and the downward spiral of "The Life," in which crack is used to manage the symptoms of trauma, retraumatization occurs in the context of crack use, and the cycle repeats. The

increased likelihood of women substance abusers to be traumatized (compared with non-substance-abusing women) is reinforced in several reports<sup>15,16,34</sup> that find women drug abusers more likely to be victims of violence.

#### Treatment of Comorbid PTSD and Substance Abuse

Treatment is a crucial issue, not only because of the prevalence and severity of co-occurring PTSD and substance abuse, but also because treatments that are typically used for PTSD or substance abuse alone may be insufficient for their combination. For example, behavioral exposure and flooding models, which are quite successful for PTSD-alone, are believed to be ill-advised for patients with substance abuse because their emotional intensity might too easily trigger a substance-abuse relapse<sup>26,35</sup> (although no empirical trials have yet studied this question). Similarly, the use of benzodiazepines for anxiety disorders is often contraindicated for patients prone to addiction.<sup>13</sup> Alcoholics Anonymous (AA) and other 12-step self-help groups, which are frequently helpful for substance abuse patients, may not be appropriate for some PTSD-substance abuse patients, for example, early in recovery or in severe cases. The presence of men at most meetings, the philosophy of not focusing on the past, and various aspects of the AA philosophy (e.g., "surrendering to a 'higher power,'" "sharing one's story publicly") may be problematic.<sup>36,37</sup> Substance abuse treatments that are heavily confrontational in approach may also be countertherapeutic for patients with PTSD and substance abuse because they may re-evolve traumatic experiences.<sup>38</sup> Likewise, for PTSD-alone there is as yet no agreed-upon, empirically validated standard of care.<sup>35</sup> Existing treatments for men with PTSD and substance abuse may also not directly transfer to women. Such treatments were typically developed for combat veterans and were

based in VA settings. Women with PTSD and substance abuse, who usually developed the disorders in the context of physical and sexual abuse, are described as having different fears from combat veterans and more self-blame, suicide attempts, revictimization, and sexual dysfunction.<sup>19,39,40</sup>

The challenge of treatment is heightened by clinical observations that suggest that women with PTSD and substance abuse tend to evoke uneasy alliances; multiple crises;<sup>23,24,31</sup> and strong negative countertransference by therapists, including sadistic and retaliatory impulses;<sup>38</sup> and that they frequently receive labels such as "poor prognosis" and "treatment failure."<sup>23,24</sup> However, at least one study has found positive outcomes and a high attendance rate for women in a psychotherapy specifically developed for PTSD and substance abuse, as well as strong alliance and patient satisfaction.<sup>41</sup>

In the future, clinical care may be improved by greater integration of PTSD and substance abuse treatments. Currently, most programs do not attempt to treat the two disorders simultaneously, instead routing patients to either PTSD or substance abuse treatment.<sup>11,26,37,38,40</sup> An integrated model, however, is consistently recommended by researchers and clinicians as more likely to succeed, more cost-effective, and more sensitive to patients' needs.<sup>3,4,9,13,23,26,37,38,40-42</sup> In many substance abuse settings, information about trauma is not attended to, and clinical staff are reluctant to assess for PTSD.<sup>9,11,40</sup> Patients' own shame and numbing about trauma also conspire against prompt case identification.<sup>4</sup>

#### Key Questions for Future Research

At this point, more is unknown than known about this population, and methodological problems limit the conclusions that can be firmly drawn from existing research.

Having emerged relatively recently, the literature on PTSD and substance abuse in women is rather limited, and studies vary enormously in their diagnostic and methodological rigor. The retrospective nature of most studies can lead to recall biases, such as those associated with trauma and the influence of substance use on memory. It is also difficult to separate the impact of trauma from the general lifestyle associated with substance abuse<sup>23</sup> and co-occurring diagnoses.<sup>13</sup> Key questions for future research include the following:

*Why do some women exposed to trauma develop substance abuse, whereas others, exposed to equivalent trauma, do not?*

This question has only begun to be addressed.<sup>10,23</sup> Moreover, no existing study has approached this question prospectively—as the syndromes emerge over time. This approach will be needed to attain a rigorous answer to this question. Attempts to prevent the development of substance abuse in PTSD patients, and vice versa, could be a productive public health effort if more were known.

One likely marker for the development of comorbid PTSD and substance abuse may be exposure to rape. Rape has been found to be the most upsetting event and the most likely to lead to PTSD among both women and men.<sup>6</sup> Given the high lifetime prevalence of rape for women—9.2%, compared with 0.7% for men,<sup>6</sup>—it is probable, though not yet demonstrated, that female rape victims may be particularly vulnerable to high rates of substance abuse.

*To what extent are patients "self-medicating" with substances?* Self-medication is often assumed to be the case (particularly by clinicians), yet this may not necessarily be true. For example, in one study,<sup>2</sup> anxiety disorders, including PTSD, were found to be present for a mean of 11 years before the onset of substance abuse;

this finding argues against a direct causal link between the two syndromes. See also Cottler et al.,<sup>14</sup> who found substance use (though not substance abuse per se) to precede PTSD. The heterogeneity of drugs abused by patients with conjoint PTSD and substance abuse<sup>43</sup> (for example, both stimulants and depressants) also suggests that self-medication may be a complex phenomenon, with much deriving from patients' particular constellation of symptoms and subjective perceptions regarding which drugs alleviate them. The fact that PTSD symptoms may be worsened by both substance use<sup>13,24,26</sup> and abstinence<sup>13,23-25,43</sup> further complicates our understanding of the self-medication phenomenon. Finally, in thinking about self-medication, it will be important to differentiate two versions: self-medication as the etiology of the substance abuse syndrome (i.e., PTSD causes a person to develop the substance abuse syndrome) and self-medication as a coping method once the disorders co-exist (i.e., substance abuse may be caused by some other factor, such as a genetic predisposition, but then may be used proximally with PTSD symptoms as an attempt to cope with them).

*Does PTSD worsen with abstinence from substances, and if so, for how long?* The phenomenon of PTSD worsening with abstinence has been described in anecdotal reports but has not yet been studied. Clearly, however, some women do recover, so this phenomenon is likely time-limited or may depend on patient factors. Providing patients and treaters with an expectable course for such changes may be an important facet of psychoeducation and may help inform decisions about what medications to prescribe. Research on symptom overlap between PTSD and substance intoxication and/or withdrawal might also help to clarify the interplay of the disorders. Neurobiological studies might also provide a more advanced understanding of connections between the disorders at a physiological level.



*What is the expected course of PTSD-substance abuse over time, both with and without treatment?* No long-term follow-up studies have yet been conducted on women with PTSD and substance abuse. Yet it is noteworthy that in the general population study of Kessler et al.,<sup>6</sup> PTSD failed to remit in more than one-third of the sample even after many years. Interestingly, this held true for both those who received treatment as well as those who did not. However, the average duration of symptoms was shorter in the former (36 months) than in the latter (64 months), which could suggest a treatment effect.

*Which tends to develop first—PTSD or substance abuse?* This question has numerous implications for prevention, education, and treatment. At this point, few studies have addressed this question because it requires rigorous data not often available at this point. Some studies have attempted it, with mixed findings.<sup>2,6,14</sup>

*How effective is treatment for women with PTSD and substance abuse?* The positive impact of treatment has been anecdotally reported,<sup>37,40,44</sup> but thus far only one prospective study has addressed this question<sup>41</sup> with findings for significant reductions in PTSD and substance abuse symptoms by the end of a 24-session cognitive-behavioral group therapy specifically designed for this population. A high treatment retention rate and strong consumer satisfaction were also reported. The only other study to address treatment of this population<sup>23</sup> found that women with PTSD and substance abuse were less likely to complete aftercare than were women with substance abuse alone. Treatment studies of mixed-gender samples may also prove informative. For example, a 12-week trial of sertraline was associated with significant reductions in PTSD, substance abuse, and depression symptoms among alcoholic subjects with PTSD, two-thirds of whom were women.<sup>45</sup>

*What is the best type of treatment for women with PTSD and substance abuse?* This question is inherently related to the one above. How effective treatment may be depends on what type of treatment is found most helpful. A multitude of issues arises: Is any theoretical orientation more effective than another? Can treatment be generic or must it be adapted to this population? How long should treatment last? In what format? What qualities in the therapist are necessary? Are particular patient characteristics predictive of good response to treatment? There is as yet no known research to address these questions. However, several researchers and clinicians recommend a coping-skills approach for this population.<sup>37,40-44</sup>

*Should both trauma and substance abuse be treated at the same time?* This is a confusing dilemma for many clinicians, who find that the yoked nature of the two disorders may prevent them from adequately addressing one without the other, whereas, on the other hand, concurrent treatment may feel unfocused or even triggering for patients. The majority of writers on this topic recommend an integrated model,<sup>3,4,9,13,23,26,37,38,40,42</sup> and single-subject case studies<sup>43</sup> provide additional support for this position. However, the lack of current knowledge about the impact of treatment on the course of PTSD and substance abuse precludes a conclusion at this point.

In sum, research has documented a high prevalence of women with PTSD and substance abuse and an initial understanding of their clinical profile. Future work will be needed to address the etiology, course, and treatment of this important population.

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## References

1. Keane TM, Wolfe J: Comorbidity in posttraumatic stress disorder: an analysis of community and clinical studies. *Journal of Applied Social Psychology* 1990; 20:1776-1788
2. Goldenberg IM, Mueller T, Fierman EJ, et al: Specificity of substance use in anxiety-disordered subjects. *Compr Psychiatry* 1995; 36:319-328
3. Najavits LM, Gastfriend DR, Barber JP, et al: Cocaine dependence with and without PTSD in the NIDA Cocaine Collaborative Study. *Am J Psychiatry* (in press)
4. Brown PJ, Recupero PR, Stout R: PTSD substance abuse comorbidity and treatment utilization. *Addict Behav* 1995; 20:251-254
5. Grice DE, Brady KT, Dustan LR, et al: Sexual and physical assault history and posttraumatic stress disorder in substance-dependent individuals. *Am J Addict* 1995; 4:297-305
6. Kessler RC, Sonnega A, Bromet E, et al: Posttraumatic stress disorder in the national comorbidity survey. *Arch Gen Psychiatry* 1995; 52:1048-1060
7. Breslau N, David GC, Andreski P, et al: Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Arch Gen Psychiatry* 1991; 48:216-222
8. Resnick HS, Kilpatrick DG, Dansky BS, et al: Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *J Consult Clin Psychol* 1993; 61:984-991
9. Fullilove MT, Fullilove RE, Smith M, et al: Violence, trauma, and posttraumatic stress disorder among women drug users. *J Trauma Stress* 1993; 6:533-543
10. Miller B, Downs W, Testa M: Interrelationships between victimization experiences and women's alcohol use. *J Stud Alcohol* 1993; (suppl 11):109-117
11. Yandow V: Alcoholism in women. *Psychiatric Annals* 1989; 19:243-247
12. Stewart SH: Alcohol abuse in individuals exposed to trauma: a critical review. *Psychol Bull* 1996; 120:83-112
13. Kofoed L, Friedman MJ, Peck R: Alcoholism and drug abuse in inpatients with PTSD. *Psychiatr Q* 1993; 64:151-171
14. Cottler LB, Compton WM, Mager D, et al: Posttraumatic stress disorders among substance users from the general population. *Am J Psychiatry* 1992; 149:664-670
15. Ladwig GB, Anderson MD: Substance abuse in women: relationship between chemical dependency of women and past reports of physical and/or sexual abuse, in *Violence Against Women*. Edited by Simpelle CM. New York, Hemisphere, 1992
16. Amaro H, Fried LE, Cabral H, et al: Violence during pregnancy and substance use. *Am J Public Health* 1990; 80:575-579
17. Dansky B, Saladin M, Brady K, et al: Prevalence of victimization and posttraumatic stress disorder among women with substance use disorders: a comparison of telephone and in-person assessment samples. *Int J Addict* 1995; 30:1079-1099
18. Rounsaville BJ, Weissman MM, Wilber CH, et al: Pathways to opiate addiction: an evaluation of differing antecedents. *Br J Psychiatry* 1982; 141:437-446
19. O'Donohue W, Elliott A: The current status of posttraumatic stress disorder as a diagnostic category: problems and proposals. *J Trauma Stress* 1992; 5:421-439
20. Berk E, Black J, Locastro J, et al: Traumatogenicity: effects of self-reported noncombat trauma on MMPIs of male Vietnam combat and noncombat veterans treated for substance abuse. *J Clin Psychol* 1989; 45(5 [Mono Suppl]):704-708
21. Bureau of Justice: *Criminal Victimization in the U.S., 1992*. Washington, DC, Dept. of Justice, 1992
22. Bolo PM: Substance abuse and anxiety disorders, in *Dual Diagnosis in Substance Abuse*. Edited by Slaby AE, Gold MS. New York, Marcel Dekker, 1991, pp 45-56
23. Brady KT, Killeen T, Saladin ME, et al: Comorbid substance abuse and posttraumatic stress disorder: characteristics of women in treatment. *Am J Addict* 1994; 3:160-164
24. Root MP: Treatment failures: the role of sexual victimization in women's addictive behavior. *Am J Orthopsychiatry* 1989; 59:542-549
25. Kovach J: Incest as a treatment issue for alcoholic women. *Alcohol Treatment Quarterly* 1986; 3:1-15
26. Abueg FR, Fairbank JA: Behavioral treatment of the PTSD-substance abuser: a multidimensional stage model, in *Posttraumatic Stress Disorder: A Behavioral Approach to Assessment and Treatment*. Edited by Saigh P. New York, Pergamon Press, 1991, pp 111-146
27. Brown GR, Anderson B: Psychiatric morbidity in adult inpatients with childhood histories of sexual and physical abuse. *Am J Psychiatry* 1991; 148:55-61
28. Kilpatrick D, Edmunds C, Seymour A: *Rape in America: a report to the nation*. Arlington, VA, National Victim Center & Medical University of South Carolina, 1992
29. Smith EM, North CS, Spitznagel EL: Alcohol, drugs, and psychiatric comorbidity among homeless women: an epidemiologic study. *J Clin Psychiatry* 1993; 54:82-87

30. Paone D, Chavkin W, Willets I, et al: The impact of sexual abuse: implications for drug treatment. *Journal of Women's Health* 1992; 1:149-153
31. Fullilove MT, Lown A, Fullilove RE: Crack 'hos' and skeezers: traumatic experiences of women crack users. *Journal of Sex Research* 1992; 29:275-287
32. Famularo R, Kinscherff R, Fenton T: Psychiatric diagnoses of abusive mothers: a preliminary report. *J Nerv Ment Dis* 1992; 180:658-661
33. Levit H: Battered women: syndrome vs. self-defense. *American Journal of Forensic Psychiatry* 1991; 9:29-35
34. Kilpatrick DG, Acierno R, Resnick HS, Saunders BE, Best CL: A 2-year longitudinal analysis of the relationship between violent assault and substance use in women. *J Consult Clin Psychol* (in press)
35. Solomon SD, Gerrity ET, Muff AM: Efficacy of treatments for posttraumatic stress disorder. *JAMA* 1992; 268:633-638
36. Satel SL, Becker BR, Dan E: Reducing obstacles to affiliation with Alcoholics Anonymous among veterans with PTSD and alcoholism. *Hosp Commun Psychiatry* 1993; 44:1061-1065
37. Evans K, Sullivan JM: *Treating Addicted Survivors of Trauma*. New York, Guilford, 1995
38. Nace EP, Davis CW, Gaspari JP: Axis II comorbidity in substance abusers. *Am J Psychiatry* 1991; 148:118-120
39. Herman JL: *Trauma and Recovery*. New York, Basic Books, 1992
40. Bollerud K: A model for the treatment of trauma-related syndromes among chemically dependent inpatient women. *J Subst Abuse Treat* 1990; 7:83-87
41. Najavits L, Shaw S, Weiss R, et al: "Seeking safety": a new cognitive-behavioral psychotherapy for women with posttraumatic stress disorder and substance abuse. *J Trauma Stress*, 1997 (in press)
42. Najavits LM, Weiss RD, Liese BS: Group cognitive-behavioral therapy for women with PTSD and substance use disorder. *J Subst Abuse Treat* 1996; 13:13-22
43. Brown PJ, Wolfe J: Substance abuse and posttraumatic stress disorder comorbidity. *Drug Alcohol Depend* 1994; 35:51-59
44. Trotter C: *Double Bind*. Minneapolis, MN, Hazeldon Press, 1992
45. Brady KT, Sonne SC, Roberts JM: Sertraline treatment of comorbid posttraumatic stress disorder and alcohol dependence. *J Clin Psychiatry* 1995; 56:502-505
46. Breslau N, Davis GC, Peterson EL, et al: Psychiatric sequelae of posttraumatic stress disorder in women. *Arch Gen Psychiatry* 1997; 54:81-87
47. Helzer J, Robins L, McEvoy L: Posttraumatic stress disorder in the general population. *N Engl J Med* 1987; 317:1630-1634
48. Kulka RA, Schlenger WE, Fairbank JA, et al: *Trauma and the Vietnam War Generation: Report of Findings From the National Vietnam Veterans Readjustment Study*. New York, Brunner/Mazel, 1990
49. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders, 3rd Edition*. Washington, DC, American Psychiatric Association, 1980
50. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders, 3rd Edition, Revised*. Washington, DC, American Psychiatric Association, 1987