Vulnerability to Alcohol and Other Drug Disorders in Rural Women

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Alcohol and other drug disorders (AOD) are a growing problem among women, with estimates as high as 11 million U.S. women affected. This article is a report of the results from 2 studies investigating risk factors for AOD disorders in rural women. Samples of the 2 studies were combined for a total of 267 women. Analyses focused on victimization as a vulnerability factor for AOD disorders in rural women. Comorbid Axis I mental disorders and nursing implications are discussed.

ALCOHOL AND OTHER drug (AOD) disorders are a growing problem among women, with estimates as high as 11 million U.S. women affected (Kreek, 1998). Over the past 10 years, women have been increasingly included in research on AOD disorders, and a body of knowledge about AOD disorders in women is beginning to accrue. However, there is little research of AOD disorders and associated risk factors among rural women. This report focuses on victimization as a possible vulnerability factor for AOD disorders in women and associated non-AOD Axis I mental disorders.

THEORETICAL PERSPECTIVE

The vulnerability-stress model is used widely to describe psychopathology (Ensel & Lin, 1991; Ingram & Price, 2001; Lazarus & Folkman, 1984). One advantage of the model is that it is consistent with current understanding of psychopathology as determined by multiple biopsychosocial factors. The premise of a vulnerability-stress model is that an individual with a vulnerability is more likely to develop a disorder when exposed to risk factors or stressors. Vulnerability, then, refers to an endogenous, enduring trait that is actualized by other stressors.

Vulnerability may take many forms and may exist in the physiologic, affective, cognitive, or social/behavioral systems (Ingram & Price, 2001). The most commonly discussed vulnerability for mental disorders is biologic, specifically, genetic vulnerability to certain disorders. However, vulnerability in other domains may be just as or more important than genetic ones. Environmental vulnerability factors include trauma, injury, or learning processes. For example, learned responses to stressors such as catastrophizing, are implicated in the vulnerability, development, and maintenance of depression. Although some vulnerability factors may not be altered directly (e.g., genetic factors), other factors such as psychologic vulnerability may be altered through new experiences and learning.

Childhood and adult victimization have been linked consistently to AOD disorders in women (Boyd, 2000; Boyd & Mackey, 2000a, 2000b; Brown, Recupero, & Stout, 1995; Dansky, Byrne, & Brady, 1999; Dansky, Saladin, Brady, Kilpatrick, & Resnick, 1995; Epstein, Saunders, & Kilpatrick, 1997; Miller, Downs, Gondoli, & Keil, 1987; Miller, Downs, & Testa, 1993; Rohsenow, Corbett, & Devine, 1998; Saladin, Brady, Dansky,

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& Kilpatrick, 1995; Teets, 1995). Victimization produces endogenous vulnerability for a wide variety of psychiatric disorders (Heim & Nemeroff, 2001; Perry & Pollard, 1998), and this type of endogenous vulnerability may be especially applicable to AOD disorders in women. The stress system, particularly the hypothatamic-pituitary-adrenal axis, may be altered permanently by traumatic events such that it becomes more sensitive to future stressors (Ballenger & Post, 1978; Gold, Goodwin, & Chrousos, 1988; Krystal, Kosten, Southwick, Mason, Perry, & Giller, 1989). This process, called *sensitization*, suggests that adults who have experienced severe trauma early in life may react more quickly to subsequent minor stressors with severe and disabling anxiety or depression. Moreover, with repeated stressors, these disorders eventually may occur spontaneously with few or no precipitating factors, a phenomenon referred to as *kindling*. More precisely, kindling refers to the fact that repeated, intermittent administration of a subthreshold stimulation over time results in increasing behavioral and physiologic responsivity, eventually culminating in the occurrence of a major motor seizure (Post & Weiss, 1998, p. 194). Not only is there stress sensitization, but episode sensitization, so that an episode of anxiety or depression itself induces vulnerability to future episodes (Ghaemi, Boiman, & Goodwin, 1999; Post et al., 1998). Therefore, the course of these disorders often becomes recurrent and progressive with longer, more frequent episodes (Post, Rubinow, & Ballenger, 1984; Post & Weiss, 1998). Recently, researchers reported that women with a history of childhood abuse exhibited increased pituitary adrenal and autonomic responses to a stressor compared with controls, thereby supporting the sensitization hypothesis (Heim, Newport, Bonsall, Miller, & Nemeroff, 2001).

Another way of describing women's vulnerability to AOD disorders that is consistent with the vulnerability-stress model is that women use AOD to self-medicate negative affect (Chassin & Ritter, 2001; Sher, 1987). Alcohol and other sedating drugs reduce physiologic reactivity and negative affect associated with the stress response (Brady & Sonne, 1999). Individuals who are temperamentally prone to experience negative affective states or those who have experienced trauma may be particularly vulnerable to developing AOD disorders (Chassin & Ritter). Exposure to trauma may result in the development of posttraumatic stress disorder, other anxiety disorders, and depression. These disorders are characterized by high levels of negative affect that women may self-medicate with AOD (Chassin & Ritter).

Rural America is not the ideal, tranquil place that some believe it to be. Devastating economic conditions over the past 20 years have created inner-city subcultures in many rural towns (National Institute on Drug Abuse [NIDA], 1997). These areas are characterized by conditions that plague poor, inner-city neighborhoods such as high crime rates, AOD use, large proportion of single-parent households, and domestic violence (NIDA, 1997; Rural Women's Work Group, 2000). In addition to increasing risk for AOD use, these conditions often are associated with increased risk for non-AOD mental disorder and functional impairment.

Research now shows that there are few differences in AOD use between rural and urban areas, and that any differences are narrowing rapidly (NIDA, 1997). However, there are few urban and even fewer rural specialized mental health or substance abuse services (NIDA, 1997; Rural Women's Work Group, 2000). Even if services are available, many rural women lack transportation to access what is available, and public transportation is unreliable. Moreover, lack of anonymity in rural communities is a barrier in seeking mental health and AOD treatment services.

Although research shows that the incidence of violence against women does not differ significantly between urban and rural areas, women living in rural areas face significant barriers in obtaining help (Rural Women's Work Group, 2000). Women may be geographically isolated without phones and transportation. Shelters, if available, may be located far enough away that women are separated from any support they may have, and they may have to give up job and child care placement in an area where these resources are scarce. In small, rural communities, victims and perpetrators of violence are involved frequently in family or other relationships with local emergency or law enforcement personnel, making it difficult or impossible to receive effective help or any help at all (Rural Women's Work Group). Moreover, objectivity and confidentiality usually are violated because of these complex relationships.

Although recent data shows that there are few differences in AOD use or violence between urban

and rural areas, there are racial differences. Data from the recent National Violence Against Women Survey (National Institute of Justice, 2000) indicates that violence is higher among African-American women. In contrast, the most recent National Household Survey on Drug Abuse (Substance Abuse and Mental Health Services Administration, 2000) indicated that use of AOD is higher among Caucasian women. If the higher rate of violence among African-American women is accurate and not a problem of underreporting by Caucasian women, then African-American women may have some unidentified factor that mediates the vulnerability-stress relationship and protects against developing AOD disorders.

In summary, violence may produce vulnerability to AOD disorders in women by altering the stress system so that women are more likely to develop psychiatric disorders and negative affect that they self-medicate with AOD. Rural women face significant barriers in obtaining help with violence, AOD disorders, and other mental disorders. The hypotheses guiding this study are: (1) rural women with AOD disorders will report significantly more childhood and adult victimization than rural women without AOD disorders, and (2) more victimized AOD women will meet criteria for non-AOD mental disorders than other women. This study makes an important contribution to the almost nonexistent literature on AOD disorders in rural women.

METHODS

Sample

The samples of 2 studies investigating risk factors for AOD disorders in rural women were combined for a total sample size of 267. The first study (N = 86) served as a pilot study for the second, larger study (N = 181). The samples were from the same population. Women were recruited from the same agencies over a continuous 4-year period. There were no differences in demographics between the 2 samples.

Women with AOD disorders (n = 131) were voluntary participants from 8 County AOD Commissions located in rural counties throughout South Carolina that offer outpatient treatment and one in-patient AOD facility that serves the entire state of South Carolina. Only women who live in rural counties and who were ready for discharge were recruited from the in-patient facility. Comparison women (n = 136) were voluntary participants from Department of Health and Environmental Control county health clinics located in and serving the same rural counties as the AOD county commissions. Both types of agencies serve predominantly lower socioeconomic clients. The racial mix for AOD agencies is approximately 60% Caucasian and 38% African American, whereas the racial mix for the Department of Health and Environmental Control clinics was approximately 60% African American and 30% Caucasian. Rural was defined as residence in a county designated by the U.S. Census Bureau to be at least 60% rural. Women between the ages of 18 to 52 years who resided in a rural area were invited to participate.

Procedure

The primary investigator (PI) recruited AOD women from county commissions by attending outpatient groups and asking for volunteers. The PI also went to the in-patient facility on a weekly basis to explain the study and ask for volunteers. Women were given an oral and written description of the study and allowed to ask questions. Volunteers provided names, addresses, and phone numbers so that study personnel could call and arrange a time and place for the interview. Research assistants (RAs) attended Department of Health and Environmental Control clinics and recruited women in the same manner as that used for AOD women. To maximize privacy and safety, data collection took place in a location designated by the woman, usually her home. Institutional Review Board approvals or single project assurances were obtained for each site, and informed consent was obtained before data collection. Appropriate procedures were taken to maintain confidentiality and security of data.

All interviews were conducted by the PI or 1 of 3 RAs. One RA was a Master's-prepared psychiatric nurse, one was a Bachelor's of Science in Nursing graduate enrolled in a nurse practitioner program, and the other held a Bachelor of Science in psychology. Interviewer training was conducted by the PI and included practice using a simulated interview format. Trainees were evaluated during the simulation sessions, which were continued until interviewers were 100% consistent in coding participant responses to interview items. Retraining sessions were conducted periodically for accuracy checks. If RAs were not sure about any portion of the diagnostic interview, they wrote

detailed notes so the PI could check recorded responses. All participants were able to read and write so there were no special procedures needed to complete questionnaires.

Instrumentation

The National Institute of Mental Health *Diagnostic Interview Schedule* (DIS) (Robins, Helzer, Croughan, & Ratcliff, 1981) was administered to determine the presence of alcohol, drug, and other psychiatric disorders based on *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) criteria (American Psychiatric Association, 1994). The DSM-IV TR had not been published at the time of data analysis. However, there are no differences in the diagnostic criteria. A software package for cleaning data and scoring the DIS was used to establish psychiatric diagnoses. The PI also checked the participant's written record with DSM-IV criteria. The DIS was used because it was designed to be used by laypersons, and it was anticipated that at least one RA would not be a graduate nurse.

Based on responses to the alcohol and drug sections of the DIS, women were assigned to the AOD group or the non-AOD group. Those 2 groups were divided further based on the experience of adult victimization. The 4 groups were as follows: (1) AOD women who had not experienced adult victimization; (2) AOD women who had experienced adult victimization; (3) non-AOD women who had not experienced adult victimization; and (4) non-AOD women who had experienced adult victimization.

Vulnerability was operationalized with 2 measures of violence. *Childhood Violence* was measured with the *Child Abuse and Trauma Scale* (CAT) (Sanders & Becker-Lausen, 1995). The CAT is a 38-item, self-report questionnaire measuring retrospective assessment of negative childhood experiences. The CAT contains 3 subscales reflecting negative home environment/neglect, sexual abuse, and punishment. Respondents indicate on a 5-point Likert scale (0 = never; 4 = always) how often a negative/abusive event was experienced. Scores on each subscale are the mean of items on the subscale. The internal consistency of the CAT has been reported as .86 for the negative home atmosphere/neglect subscale, .76 for the sexual abuse subscale, and .63 for the punishment subscale (Sanders & Becker-Lausen). CAT scales have shown construct validity by correlating with dissociation and depression (Sanders & Becker-Lausen). Internal consistency reliabilities for the study for the sexual abuse and negative home atmosphere subscales were .81 and .93, respectively. The reliability for the punishment subscale was .57 and was not used in this analysis.

Adult Violence was measured with the *Severity of Violence Against Women Scale* (SVAW) (Marshall, 1992). The SVAW scale assesses 46 acts of violence in 8 subscales: symbolic violence, threats of violence (mild, moderate, severe), acts of violence (minor, moderate, and severe), and sexual violence. Respondents indicate on a 4-point Likert scale (1 = never; 4 = many times) how often an abusive act occurred in a relationship. Responses are summed for subscale and total scale scores. Internal consistency has been reported as ranging from .60 to .74 (Marshall). The internal consistency reliability for the SVAW subscales for the study sample ranged from .81 to .91.

Data Analysis

Descriptive statistics were used to analyze group differences on demographic variables. Analysis of variance was used to analyze group differences on adult violence, and multivariate analysis of variance (MANOVA) was used to analyze group differences on 2 types of childhood violence. MANOVA is the analysis of choice for testing group differences on more than one moderately correlated dependent variable (Munroe & Page, 1993; Polit, 1996; Tabachnick & Fidell, 1996). MANOVA takes the correlations among dependent variables into account when it creates the composite dependent variable, thereby reducing type I error (Polit). Pillai's criterion was chosen as the multivariate statistic to test significance of group difference because it is more conservative and more robust than the other tests of significance, especially when there are unequal n's and the assumption of homogeneity of variance-covariance matrices is violated (Tabachnick & Fidell).

RESULTS

Sample Characteristics

Two hundred sixty-seven women ranging in age from 18 to 52 years (mean age, 30.2 y, SD = 8.3) comprise the sample. Over half were African American (n = 135, 52.5%) and had a minimum of

Table 1. Means, SD, and 1-Way Analysis of Variance for Violence

	Non-AOD Women (n = 65)		AOD Women (n = 116)		
	M	*SD*	*M*	*SD*	*F* (1, 179)
Total score for severity of violence against women	64.9	23.8	101.5	37.4	50.4*

*$P < .001$.

a 12th grade education (mean, 12; SD = 2). More women had never been married (n = 114, 44.4%), than were married (n = 84, 32.7%), or had been previously married (n = 58, 22.6%). Over half the sample were unemployed (n = 139, 54.1%), 91 (35.4%) women worked full time, and 27 (10.5%) worked part time. The mean income was $23,697 (SD = $18,597; range, $0–$85,000). There were no significant differences in demographics among the 4 groups of women, with the exception of marital status. More AOD women who had not experienced adult violence had never been married ($\chi^2 = 21.5$, $P = .001$).

Victimization

One hundred eighty-three women (69%) reported experiencing violence in at least one adult relationship. Eighty-nine percent of AOD women reported adult victimization in comparison with 49% of non-AOD women. To avoid multicollinearity, the total scale score on the SVAW was used to analyze group differences in violence. AOD women had significantly higher mean scores on the total SVAW scale than non-AOD women (Table 1).

Violence includes more than physical acts, therefore, it is informative to note differences in mean scores on the 4 broad categories of violence measured by the SVAW: symbolic violence, threats of violence, physical violence, and sexual violence. AOD women reported more violence in every category than did non-AOD women. Table 2 summarizes the means and SDs for non-AOD and AOD women on the 4 types of violence. More Caucasian women reported adult violence than did African-American women (70.5% vs. 65%); however, there were no differences in the total violence score by race.

Differences in childhood violence were examined for 4 groups of women, that is, the non-AOD and AOD women were further divided into 2 groups based on the experience of adult violence. Because the correlation between the 2 dependent variables was moderate (r = .63), MANOVA was the analysis of choice for the 2 dependent variables. By using Pillais criterion, there were significant differences in the 4 groups of women on the 2 types of childhood violence, negative home atmosphere and sexual abuse ($F = 14.7$, $df = 6$ of 524, $P < .001$). Both groups of women who had experienced adult violence, that is non-AOD and AOD, reported more childhood violence than women who had not experienced adult violence. AOD women who had experienced adult violence reported significantly higher levels of childhood violence than the other 3 groups of women. Table 3 summarizes the means, SDs, and univariate results for the 4 groups of women on the 2 types of

Table 2. Means and SDs for 4 Types of Violence With Example Subscale Items

	Non-AOD Women			AOD Women		
	M	*SD*	*Range*	*M*	*SD*	*Range*
Symbolic violence	6.1	2.8	4-16	9.3	4.3	4-16
Hit or kicked a wall						
Drove dangerously with you in the car						
Threats of violence	22.9	10.1	15-51	35.9	13.5	15-60
Made threatening gestures at you						
Threatened you with a weapon						
Physical violence	28.6	11.1	21-65	45.5	18.3	21-82
Pushed or shoved you						
Beat you up						
Sexual violence	7.7	3.1	6-20	10.5	5.6	6-24
Demanded sex whether you wanted to or not						
Physically forced you to have sex						

Table 3. Means, SDs, and Univariate Results for Child Abuse and Trauma

	Non-AOD Women				AOD Women				
	No Adult Violence (n = 69)		Adult Violence (n = 67)		No Adult Violence (n = 15)		Adult Violence (n = 116)		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*
Negative home atmosphere	.49	.69	1.1	.98	1.2	.91	1.7	.90	29.1*
Sexual abuse	.16	.54	.26	.54	.06	.15	.73	.87	13.3†

*Mean of AOD women with violence > mean of both groups of non-AOD women $P < .001$.
†Mean of AOD women with violence > mean of other groups $P < .001$.

childhood violence. There were significant differences in negative home atmosphere by race with Caucasian women reporting more negative conditions ($F = 5.2$, $df = 2$ of 178, $P < .01$).

Psychiatric Diagnoses

Forty-nine percent of the sample met criteria for an AOD disorder. The non-AOD and AOD women were further divided into 2 groups based on the experience of adult violence. Within the AOD group, 62% of women who had experienced adult violence met criteria for a non-AOD Axis I psychiatric disorder in comparison with 33% of women who had not experienced adult violence. Within the non-AOD group, 43% of women who had experienced adult violence met criteria for an Axis I psychiatric disorder in comparison with 15% of women who had not experienced adult violence. Table 4 shows the percentage of women in the 4 groups meeting criteria for each disorder. Many women met criteria for more than one disorder. All disorders are primary (not AOD related) and current.

There were racial differences in Axis I disorders. More Caucasian women met criteria for AOD disorders than did African-American women (alcohol dependence = 32% vs. 30%; alcohol abuse = 9% vs. 7%; drug dependence = 45% vs. 42%; drug abuse = 46% vs. 26%). Sixty-three percent of Caucasian women met criteria for a non-AOD Axis I disorder in comparison with 51% of African-American women. The most common disorders for Caucasian women in order of frequency were posttraumatic stress disorder, panic disorder, and single-episode major depression. The most common disorders for African-American women were recurrent major depression, posttraumatic stress disorder, and panic disorder.

DISCUSSION

Results from this study indicate that violence is common in the lives of rural women, especially in

Table 4. Percentage of Women Meeting Criteria for Axis I Psychiatric Disorders by Group

	Non-AOD Women		AOD Women	
	No Adult Violence (n = 69) %	Adult Violence (n = 67) %	No Adult Violence (n = 15) %	Adult Violence (n = 116) %
Social phobia	0	1.5	0	11.2
Specific phobia	0	4.5	13.3	5.2
Panic without agoraphobia	5.8	19.1	0	19.8
Panic with agoraphobia	0	4.5	6.7	3.4
Generalized anxiety disorder	0	7.5	6.7	12.1
Posttraumatic stress disorder	5.8	10.4	0	34.5
Major depression/single episode	5.8	7.5	6.7	13.8
Major depression/recurrent	2.9	11.9	13.3	22.4
Bipolar I	1.4	0	0	3.4
Dysthymia	0	1.5	0	.9
Alcohol dependence	0	0	33	48
Alcohol abuse	0	0	20	12
Drug dependence	0	0	87	80
Drug abuse	0	0	48	66

the lives of rural women with AOD disorders. In light of results from other research (National Institute of Justice, 2000) that found that African-American women experience more violence than Caucasian women, the differences in violence by race in this study may have resulted from differences in race between interviewers and participants. All study personnel were Caucasian, and some African-American women may have been hesitant to disclose violence to Caucasian women.

Victimization contributed to significant psychologic distress as evident in the numbers of victimized women meeting criteria for AOD and non-AOD Axis I psychiatric disorder. Posttraumatic stress disorder, panic disorder, and recurrent major depression were the most common diagnoses for victimized women. These disorders are associated with significant distress and disability and are among the most difficult disorders to treat because their course is often chronic and progressive (Post & Weiss, 1998).

Often, health care professionals and the public think of violence only in terms of physical and/or sexual assault. However, violence occurs on a continuum and includes symbolic gestures such as kicking a wall and verbal assaults on self-esteem. The AOD women experienced a high rate of threats of violence, and these women often related that verbal violence is worse than actual physical battering (Boyd & Mackey, 2000a). Living in a threatening or explosive atmosphere, whether or not physical or sexual violence occurs, is extremely distressing and contributes to stress-related disorders.

Because many women came from violent homes, they experienced violence most of their lives. In another study, rural women from violent homes reported learning that violence toward women was acceptable, and they learned to expect it in adult relationships (Boyd & Mackey, 2000a, 2000b). Teaching young girls and young men that violence toward women is unacceptable in any form may be an important part of a primary prevention strategy.

Correlation does not determine causality. However, findings suggest that violence may be a vulnerability factor for AOD disorders in women. Almost twice as many AOD women experienced adult and childhood violence than non-AOD women. Racial differences showed that more Caucasian women reported violence than African-American women, and more Caucasian women met criteria for AOD disorders. Victimization sensitizes the stress system so that exposure to subsequent stressors may be more likely to result in development of mental disorders that women medicate with AOD (Fahlke, Lorenz, Long, Champoux, Suomi, & Higley, 2000; Heim & Nemeroff, 2001; Perry & Pollard, 1998). Importantly, one recent preclinical study has shown that early trauma and associated increased cortisol levels predicted alcohol preference in young adult monkeys (Fahlke et al.). Although still to be shown in humans, this study does provide evidence that trauma-related stress sensitization is a vulnerability for AOD disorders (Fahlke et al.; Perry & Pollard).

Victimization also may contribute to psychosocial vulnerability to AOD disorders. Women victimized early in life who use AOD to cope with psychologic pain develop high expectations for the relief that AOD provide and do not learn healthy problem-solving coping to manage the source of their distress (Lazarus & Folkman, 1984; Maisto, Carey, & Bradizza, 1999). These women continue to rely on AOD to manage negative affect and to cope with life's problems (Maisto et al., 1999).

Results of this study and the PI's recent qualitative study suggest that rural women are self-medicating dysphoria associated with psychiatric disorder related to childhood and adult violence in their lives. Self-medicating may be the only choice for many of these women because their low socioeconomic and rural status are barriers in accessing appropriate treatment. Because many of these women have more than one disorder, they are challenging for even the most experienced professionals. Moreover, treatment is complicated further by the separation that exists among primary care, mental health, AOD, and domestic violence services. It may be difficult to find even one type of service in rural areas, let alone an agency prepared to deal with women with multiple problems.

NURSING IMPLICATIONS

Nurses should screen all clients (children, adults, men, and women) for violence. Often, survivors do not report abuse without being asked specifically. Only 13% of women seen in an emergency room after a battering incident either told staff or were asked by staff about abuse (Sisley, Jacobs, Poole, Campbell, & Espisito, 1999). Asking specific abuse screening questions has been

shown to substantially increase detection (from 3% to 15%) (Sisley et al.). Nurses need a repertoire of abuse-related questions that are age specific and culturally sensitive. Moreover, because symbolic violence is part of a progressive continuum of violence and can be assessed quickly and easily, such an assessment may represent a pre-abuse screen (McFarland, Wiist, & Watson, 1998). Progression from symbolic violence to more severe violence may be modifiable if symbolic violence is assessed early. This suggests that screening men and women for symbolic violence and teaching the importance of symbolic violence in the progression to more severe violence could be important primary prevention tools (McFarland et al.).

Evidence suggests that stress sensitization can be altered if abused children are identified early and therapeutic intervention begun. Research shows that antidepressants, particularly selective serotonin reuptake inhibitors, decrease activity in one or more corticotropin-releasing factor neural systems involved in the stress response (Heim & Nemeroff, 2001). Moreover, animal studies have shown that these agents reverse neurobiologic consequences of early life stress, thereby reducing increased vulnerability to stress, depression, and anxiety (Heim & Nemeroff). Advanced practice nurses with prescriptive privileges can prescribe appropriate medications, and nurses at all levels can monitor efficacy and side effects. Research also shows that abused children who were placed in an early intervention foster care program that promoted positive parenting showed improved behavioral adjustment and decreases in salivary cortisol levels (Fisher, Gunnar, & Reid, 2000).

Victimized women have special needs that should be addressed during AOD treatment (Boyd, 2000; Root, 1989). As AOD detoxification progresses, memories of traumatic experiences resurface and cause additional anxiety and depression. Women need help to manage these symptoms to prevent dropping out of treatment and relapsing (Boyd; Root, 1989). Psychotropic medications may be indicated to treat other primary disorders such as major depression and posttraumatic stress disorder so that recovery is not threatened while women learn to cope with emotions previously medicated with AOD (Boyd; Root). Long-term psychotherapy may be indicated to help women resolve many violence-related issues and learn healthier ways to manage stressors in their lives.

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