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# Psychological Distress and Intimate Physical and Sexual Abuse among Women in Methadone Maintenance Treatment Programs

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Guided by the cognitive theory of stress and coping and the comprehensive health-seeking and coping paradigm, this study examines associations among intimate partner abuse and psychological distress, posttraumatic stress disorder, childhood sexual abuse, and current drug use among a cohort of 416 women randomly recruited from New York City methadone treatment programs. Findings expand on past evidence of the high prevalence of psychological distress among adult victimized women and among those with a history of childhood sexual abuse. Women currently abused by their partners have more posttraumatic stress symptoms, depression, and psychological distress than women not abused by their partners.

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This article examines the associations among depression, posttraumatic stress disorder (PTSD), and intimate partner abuse with a random sample of women in methadone maintenance treatment programs (MMTPs). Several studies find a high prevalence of lifetime and current depressive disorders and PTSD among such women (Brown and Wolfe 1994; Hien and Levin 1994; Brienza et al. 2000). Additionally, a significant number of women in drug treatment (60–75 percent) report a history of assault by an intimate partner (Dunn, Ryan, and Dunn 1994; Dansky, Byrne, and Brady 1999; El-Bassel et al. 2000). As discussed below, psychiatric disorders, trauma, and intimate partner abuse may be intersecting problems for women in drug treatment.

### Why Expect Associations? Theory and Empirical Evidence

Among the powerful theoretical frameworks that explain the relationships among intimate partner abuse, PTSD, and depression are the cognitive theory of stress and coping (Folkman 1984; Lazarus and Folkman 1984; Folkman et al. 1993) and the comprehensive health-seeking and coping paradigm (CHSCP; Nyamathi 1989; Nyamathi, Keenan, and Bayley 1998). Both are based on the conceptualization that coping is an ongoing and multidimensional process and not a unidimensional, static personality trait (Nyamathi 1989).

The cognitive theory of stress and coping holds that whether a situation is experienced as a threat, harm, or challenge depends on a cognitive mediating process known as appraisal. Appraisal is the means by which a person evaluates the potential outcomes of a situation and the coping resources and options available to deal with it (Folkman and Lazarus 1980). The stressful events themselves do not necessarily predict unfavorable outcomes, but how one appraises and copes with these events determines their impact on mental health (Lazarus and Folkman 1984; Brook et al. 1999). Consequently, the same situation can be interpreted by one person as a threat, harm, or loss and by another person as a challenge. Appraising the stressful situation as controllable and challenging promotes problem-focused coping, which leads to an attempt to confront and change the sources of stress. Appraising the situation as harmful and uncontrollable promotes emotional-focused coping, which leads to an attempt to reduce emotional discomfort associated with the stressful situation without making any attempt to change it. One of the major strategies of emotional-focused coping is avoidance. Avoidance includes cognitive aspects such as distraction, emotional aspects such as keeping one's feelings to oneself, and behavioral aspects that in many cases are expressed by substance use (Folkman et al. 1993; Mikulincer 1994; Galaif, Nyamathi, and Stein 1999).

The comprehensive health-seeking and coping paradigm (CHSCP) is a conceptual paradigm adapted from the stress and coping paradigm and

the Rozella Schlotfeldt (1981) paradigm of health-seeking behaviors. The CHSCP explains factors influencing drug and alcohol use among impoverished adult women, as well as their help-seeking and coping behavior. According to this paradigm, coping behavior is influenced by complex factors such as the duration of, past experience with, and perceived control over a stressor. Chronic stresses physically and psychologically wear a person down. Perceived control over a situation promotes an individual's physical and mental health. It is associated with the adoption of problem-focused coping, which is a positive, adaptive response directed toward managing stressors. Perceived lack of control is associated with the adoption of emotion-focused coping such as avoidance, which is a negative, maladaptive response to stress (Nyamathi, Stein, and Brecht 1995). The CHSCP categorizes drug use as an avoidance, emotion-focused coping mechanism (Galaif, Nyamathi, and Stein 1999) linked to depression, anxiety, general mental health impairment (Nyamathi, Keenan, and Bayley 1998), and high sexual risk behavior (Nyamathi, Stein, and Brecht 1995). According to this conceptual framework, mental health professionals can facilitate replacing avoidance with problem-focused strategies (Nyamathi 1989). Thus, this conceptual framework can lead to a better understanding of the interrelationships between intimate partner abuse, drug use, and women's mental health and to developing and disseminating assessment and intervention strategies among women who are drug-involved.

According to the cognitive theory of stress and coping and the CHSCP, experiencing abuse in childhood and then victimization in adulthood can be perceived as prolonged and uncontrollable stressful situations. Both theories hold that women who experience childhood sexual or physical abuse might use avoidance as a coping strategy, especially one of its behavioral manifestations, drug use, to alleviate or distract themselves from the pain associated with an abuse history or current abuse (Spatz-Widom, Luntz-Weiler, and Cottler 1999). According to both conceptual frameworks, avoidance is a risk factor for depression and other psychological distress (Folkman and Lazarus 1986; Carver and Scheier 1994; Schwarzer and Schwarzer 1996; Stein and Nyamathi 1999). Empirical evidence discussed below links childhood abuse with drug use (e.g., Kendler et al. 2000), psychological distress (e.g., Duncan et al. 1996), and intimate partner abuse as an adult (Gilbert et al. 1997). Thus, it might well be that childhood abuse sets up psychological mechanisms such as adopting avoidance coping, instead of more adaptive problem-solving coping, that give rise to drug use, current intimate partner abuse, and psychological distress. Therefore, in order to explore the associations between current partner abuse and psychological distress, it is important to control for possible confounding effects of childhood abuse and current drug use.

*Relationships among Intimate Partner Abuse, PTSD, and Depression*

Bonnie Dansky, Christina Byrne, and Kathleen Brady (1999) find that almost 90 percent of men and women receiving inpatient treatment for substance abuse report that they experienced sexual and or physical assault during their lifetimes. Louisa Gilbert and colleagues (1997) report that nearly two-thirds (64.9 percent,  $n = 98$ ) of the women participating in an MMTP said that they have been either physically or sexually abused or have had their lives threatened by a spouse or boyfriend. Posttraumatic stress disorder is a significant problem for women in substance abuse treatment who have been abused by an intimate partner. Dansky, Byrne, and Brady (1999) find that about one-fourth of the women in their sample met the criteria for PTSD. This rate is much higher than the prevalence of PTSD in the general population (Cottler et al. 1992; Dansky et al. 1996). Women with a history of abuse are also significantly more depressed than nonabused women (Plichta 1992; Browne 1993; Gilbert et al. 1997).

Although studies examine the prevalence of depression and PTSD among women in drug treatment who have experienced intimate partner abuse (but see Cascardi, O'Leary, and Schlee 1999), the association among present psychological distress, PTSD, and intimate partner abuse has not been sufficiently investigated. For example, there is limited evidence identifying whether these associations are confounded by a history of childhood abuse or by current drug use (Brown and Wolfe 1994; Hien et al. 2000).

Nabila El-Bassel and colleagues (2000) find that more than half of the women in a methadone maintenance treatment program reported childhood sexual, physical, or life-threatening abuse. Other studies show a relationship between a history of childhood abuse and a woman's psychological distress. There is considerable evidence that adolescents or adults who have experienced childhood sexual or physical abuse have adjustment difficulties, including depression, suicidal ideation, anxiety (Briere and Runtz 1988; Carlin and Ward 1992; Boudewyn and Liem 1995), PTSD (Weissmann-Wind and Silvern 1992; Lucenko, Gold, and Cott 2000), or other psychiatric symptomatology. Women abused in adulthood often report a history of childhood sexual or physical abuse (Briere 1990; Weissmann-Wind and Silvern 1992; Gilbert et al. 1997; Cohen et al. 2000; El-Bassel et al. 2000; Gilbert et al. 2000). In one MMTP sample, women with histories of childhood sexual abuse are found to be more susceptible to developing PTSD following a traumatic event such as an episode of intimate partner abuse (Hien et al. 2000). Recent evidence revealed that child sexual abuse is causally related to an increased risk for psychiatric disorders (Kendler et al. 2000). It is therefore important to control for a history of childhood abuse when

examining the associations between depression and global psychological distress, PTSD, and intimate partner abuse among women in MMTPs.

*Substance Abuse and Women's Mental Health*

Studies show a co-occurrence of depression and substance abuse among adolescents (Bukstein, Glancy, and Kaminer 1992; Rao, Daley, and Hammen 2000) and adults (Boyd 1993; Kessler et al. 1994). A recent study (Rao, Daley, and Hammen 2000) examining substance abuse disorders among late adolescent women during the post-high school transition reveals substance abuse continuing from adolescence to young adulthood. Depression and substance abuse were correlated both in adolescence and early adulthood. Specifically, in women who began to abuse drugs in late adolescence, the probability of depression was 33.6 percent within 1 year, 61.5 percent within 2 years, 71.1 percent within 3 years, and 81.9 percent in less than 4 years (compared with 17 percent, 26.8 percent, 31.7 percent, and 42.9 percent, respectively, among women without substance use). Furthermore, although drug use increased the risk for depression over 5 years, the reverse was not true (Rao, Daley, and Hammen 2000). The rates of depression among needle exchange program participants increased in a 6-month follow-up (Brienza et al. 2000). Thus, drug use as a manifestation of avoidance coping is strongly associated with psychological distress even without intimate partner abuse or childhood abuse. Women in MMTPs are supposed to abstain from any other drugs. However, a large proportion of them are still using other drugs. Specifically, Gilbert et al. (1997) found that 60.9 percent of women who had been in methadone treatment reported crack or cocaine use in the past 90 days despite the long time that they had already been in the program (an average of 3.8 years). It is therefore important to adjust for drug use when examining the associations between depression and other mental health scales and current intimate partner abuse among women in drug treatment.

The following hypotheses were examined:

**HYPOTHESIS 1.** Women in MMTP who are currently abused by their intimate partner will report higher levels of current polydrug use and injection drug use than nonabused women.

**HYPOTHESIS 2.** Women in MMTP who are currently polydrug users or who inject drugs will have more depressive symptoms, PTSD, and global psychological distress than women who currently use no drug other than methadone prescribed by the MMTP.

**HYPOTHESIS 3.** Women in MMTP who have a history of childhood sexual abuse will have more depressive symptoms, PTSD, and global psychological distress than will women who were not sexually abused in childhood.

**HYPOTHESIS 4.** Women in MMTP who report current abuse by their

intimate partner will report more depression, PTS symptoms, and global psychological distress, after childhood sexual abuse and current poly-drug or injection drug use are controlled for, than will women who do not report current intimate partner abuse.

## Methods

### *Random Sampling and Recruitment Procedures*

Using a random number generator in SPSS 7.0, we randomly selected a sample of 968 women (57 percent) from a total population of 1,708 women in 15 methadone maintenance treatment clinics in New York City. Study recruiters contacted selected participants and informed them about the project, providing them with a brief oral and written description of the study. Participants were also referred to the study by the clinic staff. Of the 968 randomly selected women, 559 (58 percent) agreed to participate in a 15-minute screening interview; 215 (22 percent) were not approached because they had been terminated from the program at the time of screening and therefore did not meet eligibility criteria; and 194 (20 percent) refused to participate or missed three or more appointments for screening. The recruiters screened selected participants for eligibility. A woman was eligible for the study if she met the following study criteria: (1) she was between the ages of 18 and 55; (2) she had been enrolled in a methadone maintenance treatment program for at least 3 months; and (3) during the past year,

- a) She had a sexual or a dating relationship with someone whom she described as her boyfriend, girlfriend, spouse, or a regular sexual partner; or
- b) She was living with or had lived with someone with whom she formerly had a sexual relationship and whom she described as her boyfriend, girlfriend, spouse, regular sexual partner, or the father of her children; or
- c) She was sharing economic resources or child care with someone with whom she formerly had a sexual relationship and whom she describes as her boyfriend, girlfriend, spouse, regular sexual partner, or the father of her children.

### *Participants*

The complete sample includes 416 women who met eligibility criteria and completed a baseline interview. However, 30 women were excluded from the data analysis because they had a female main partner; five women were excluded because they indicated two individuals as their main partner; and three women were excluded because of excessive missing data on the intimate partner abuse scale (CTS-2). The current

article is therefore based on analyses conducted with 378 women who had a male main partner.

All participants signed a consent form that detailed confidentiality procedures and their rights as research participants. The institutional review boards of the participating MMTPs and Columbia University approved the protocol for this study. Participants received \$5 as compensation for completing the screening interview and \$20 for completing the baseline interview.

#### *Measurements*

Experienced female interviewers conducted structured face-to-face interviews with participants. Bilingual interviewers interviewed Spanish-speaking participants. The following domains were addressed.

Demographics included age, ethnicity, relationship status, level of education, level of income, homelessness history, history of incarceration, and duration of methadone treatment. The respondent was also asked whether she had a steady sexual partner during the past year, had children under the age of 18, and whether these children lived with her.

Partner's abuse was measured by the Revised Conflict Tactics Scales (CTS2; Strauss et al. 1996). The CTS2 contains five subscales that measure physical assault, injury, sexual coercion, psychological aggression, and negotiation. Responses were coded on an eight-point Likert scale, ranging from zero (never happened) to seven (occurred more than 20 times during the past 6 months). The internal consistency of the CTS2 scales ranges from .79 to .95. There is also evidence of construct validity and discriminant validity (Strauss et al. 1996). Because of their focus on physical and sexual abuse, not limited to injuries, this article addresses two of the five subscales: physical assault and sexual coercion. A combined measure of physical and sexual abuse during the past 6 months by a main male partner was computed. Women who reported at least one incident of physical or sexual abuse during the past 6 months were coded as abused women. Women who did not report any incidents of physical or sexual abuse during the past 6 months were coded as nonabused.

Depression and global psychological distress were measured by the Brief Symptom Inventory (BSI; Derogatis 1993; Derogatis and Savitz 1999). The BSI is a 53-item brief self-report symptom inventory. It is designed to assess the psychological symptom patterns of community respondents and psychiatric and medical patients. The BSI includes a global severity index that provides a flexible overall assessment of psychological status and nine symptom dimensions of psychological distress: depression, anxiety, hostility, somatization, obsessive-compulsive behavior, interpersonal sensitivity, phobic anxiety, paranoid ideation,



and psychoticism. This article addresses the global severity index and the depression subscale.

Posttraumatic stress disorder (PTSD) was assessed by the Posttraumatic Stress Diagnostic Scale (PDS; Foa 1995), which is a 49-item self-report instrument designed to help diagnose posttraumatic stress disorder. The structure and content of the PDS mirror the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV; American Psychiatric Association 1994), diagnostic criteria for PTSD. An individual's PDS results include six components. Because of an interest in assessing the presence or absence of PTSD and the severity of symptoms among participants who may or may not meet diagnostic criteria for PTSD, two of the components are analyzed in this article: PTSD diagnosis and Symptom Severity Score, which ranges from zero to 51.

Drug use was assessed by asking respondents eight questions about the frequency of the use of several drugs during the past 6 months. Each question started with the introduction: "In the past 6 months how often have you . . ." (1) injected heroin; (2) sniffed, smoked, or inhaled heroin; (3) injected cocaine; (4) sniffed cocaine; (5) smoked crack; (6) freebased cocaine; (7) injected speedball (heroin and cocaine); and (8) smoked marijuana. Responses for each of the eight questions were coded on an eight-point Likert scale, ranging from zero (never) to seven (two or more times a day). These eight items were calculated differently to form two continuous and two dichotomous scales. First, a combined scale of polydrug use was computed based on the mean of the eight questions. The interitem reliability of the eight questions was .63. This is a continuous scale that potentially ranges from zero to 56 (in the current study, it ranged from zero to 39). Second, a combined scale of injection drug use was computed based on questions 1, 3, and 7 above (i.e., injected heroin, injected cocaine, and injected speedball). Interitem reliability for these items was .78. This is a continuous scale that in the current study ranged from zero to 17. Finally, two dichotomized scales based on the previous two scales were used: a dichotomous scale of any drug use was recoded to zero for those who never used any kind of drug during the past 6 months and one for all others, and a dichotomous scale of injection drug use was recoded to zero for those who never injected drugs during the past 6 months and one for all others.

Childhood sexual abuse was assessed by the Childhood Sexual Abuse Interview (CSAI). The CSAI consists of questions for adults that evaluate history of specific sexual experiences prior to age 18. Interview questions were generated from the list created by David Finkelhor (1979) and supplemented with questions by Suzanne Sgroi (1982). Sexual abuse is defined by experiences ranging from an invitation to do something sexual to sexually oriented touching to intercourse, and it is scored by self-report of presence or absence of each item. In order to meet abuse

criteria, force had to be involved in the act, or the act had to be committed by a person five or more years older than the participant or by a relative of the participant. Based on factor analysis with Varimax rotation conducted for this study, two subscales were generated by summing scores of individual items: touching or exposure was measured by six items (e.g., Did anyone ever touch your body, breast, or private sexual parts; Did anyone ever show you their private sexual parts?); penetration was measured by three items (e.g., Did anyone ever put his penis in your mouth or put their mouth on your private sexual parts; Did anyone have intercourse with you?).

### Data Analysis

We first compared abused ( $n = 158$ ) and nonabused ( $n = 220$ ) women on background variables as well as on the study's variables (i.e., drug use, childhood sexual abuse, PTSD, depression, and global psychological distress) by using chi-square tests for categorical variables and  $t$ -test for continuous variables. Next, for the purpose of this study, we conceptualized intimate partner abuse as an independent variable and PTSD, depression, and global psychological distress as dependent variables. Drug use (either a combined scale of polydrug use or combined scale of injection drug use) and childhood sexual abuse (two subscales were measured together: touching or exposure and penetration) were used as covariates because they were considered as having the potential to confound the association between main male intimate partner abuse and the dependent variables. Data were analyzed with SPSS Version 10.0 for Windows.

### Results

#### *Demographic Background*

The average age of the respondents was 39.85 (SD = 6.76) years, with an educational level of 11.04 (SD = 2.48) years. Of the total sample, 47.1 percent were Latina, and 30.7 percent were African American. The majority of the participants were single, divorced, separated, or widowed (78.6 percent), and more than half (57.1 percent) had children under the age of 18. Most of the women whose children were under the age of 18 lived with these children (76.9 percent). Reportedly, 8.7 percent of the women were homeless, and 5.8 percent were incarcerated at some point during the past 6 months. Slightly more than one-fifth (21.7 percent) of the women were employed during the past 6 months. The mean number of years in methadone treatment was 9.11 (SD = 6.98; see table 1).

Table 1

SOCIODEMOGRAPHIC CHARACTERISTICS OF ABUSED AND NONABUSED WOMEN

Characteristics	Abused (%; <i>n</i> = 158)		Nonabused (%; <i>n</i> = 220)		Total Sample (%; <i>n</i> = 378)	
Ethnicity:						
African American	32.9		29.1		30.7	
Latina	50.0		45.0		47.1	
Other	17.1		25.9		22.2	
Marital status:						
Single, never married	48.1		43.6		45.5	
Married/common law	17.7		24.1		21.4	
Separated, divorced, widowed	34.2		32.3		33.1	
Have children under age of 18:						
Live with children*	55.1		58.6		57.1	
Live with children*	74.7		78.3		76.9	
Homeless during the past 6 months	11.4		6.8		8.7	
Incarcerated during the past 6 months	7.6		4.5		5.8	
	M	SD	M	SD	M	SD
Age (in years)	39.50	(6.85)	40.10	(6.69)	39.85	(6.76)
Educational level (highest grade completed)	11.20	(2.05)	10.92	(2.75)	11.04	(2.48)
Monthly average income (\$) during the past year	842.81	(903.32)	863.20	(734.19)	854.68	(808.11)
Length of time (years) on methadone	8.89	(7.26)	9.26	(6.78)	9.11	(6.98)

\* For those women who have children under age 18 (*n* = 216).

#### *Recent Intimate Partner Abuse*

Of the total sample, 41.8 percent reported experiencing intimate partner abuse defined above (i.e., physical or sexual abuse) by their main male partner during the past 6 months. There were no significant differences between abused and nonabused women on background variables (see table 1).

#### *Drug Use and Intimate Partner Abuse (Hypothesis 1)*

Sixty (60.1) percent of the total sample report that they used multiple illicit drugs (polydrug scale) at least once a month during the past 6 months, and 20.4 percent reported that they injected drugs (e.g., heroin, cocaine, or both) at least once a month during the past 6 months. Abused women's reported average frequency of polydrug use during the past 6 months was higher than that of nonabused women ( $t(376) = 2.92$ ;  $p < .01$ ). The average frequency of injected drug use was similar for abused and nonabused women ( $t(376) = .79$ ;  $p > .2$ ). These findings, thus, par-

Table 2

MEANS OF POSTTRAUMATIC STRESS SYMPTOMS, GLOBAL PSYCHOLOGICAL DISTRESS, AND DEPRESSION AMONG DRUG USERS AND NONDRUG USERS

TYPES OF DIAGNOSES	DRUG USERS (Combined Scale; <i>n</i> = 227)		NONDRUG USERS ( <i>n</i> = 151)		INJECTION DRUG USERS ( <i>n</i> = 77)		NONINJECTION DRUG USERS ( <i>n</i> = 301)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
PTS symptoms	14.50	(13.03)	11.33	(11.69)	15.29	(13.39)	12.77	(12.38)
PTSD diagnosis	31.9%	(66)	22.9%	(30)	40.9%	(27)	25.4%	(69)
Global psychological distress	.89	(.72)	.67	(.59)	.94	(.81)	.76	(.64)
Depressive symptoms	.98	(.89)	.68	(.78)	1.06	(1.00)	.81	(.81)

NOTE.—PTS = posttraumatic stress; PTSD = posttraumatic stress disorder.

tially support the study's first hypothesis, that women who report current intimate abuse by their partner will also report higher levels of current polydrug use. But there is no evidence that partner abuse relates to injection drug use.

#### *Drug Use and Psychological Distress (Hypothesis 2)*

There were no significant differences between women who reported current polydrug use and those who did not (on the dichotomized measure) in meeting the criteria for PTSD ( $\chi^2 = 3.18, p < .1$ ), but there were significant differences on PTSD between those who injected drugs (dichotomized measure) and those who did not ( $\chi^2 = 6.31, p < .05$ ; see table 2). As for PTS symptoms, more symptoms were found among polydrug users than among nonusers ( $t(335) = 2.26, p < .05$ ) but not among injection versus noninjection drug users ( $t(335) = 1.46, p > .1$ ). These findings partially support hypothesis 2, that women who were current polydrug users had more PTS symptoms, but not a higher rate of PTSD, compared with women who were not drug users. Women who injected drugs had higher rates of PTSD but cannot be said to have had statistically significantly more PTS symptoms compared with other women in the sample.

Women who were current polydrug users had a higher average of depressive symptoms than their counterparts ( $t(376) = 3.32, p < .01$ ). Women who currently used injection drugs also had a higher average of depressive symptoms ( $t(376) = 2.36, p < .05$ ). The findings support hypothesis 2.

Women who were current polydrug users had a higher average of

global psychological distress than women who were not ( $t(374) = 3.09, p < .01$ ). Women who currently injected drugs also had a higher average of global psychological distress ( $t(374) = 2.07, p < .05$ ; see table 2). Thus, support for hypothesis 2 was found.

*A History of Childhood Sexual Abuse and Psychological Distress (Hypothesis 3)*

About half of the women (45.8 percent) reported childhood sexual abuse by a relative, someone who used force, or someone who was at least 5 years older than they were at the time of abuse. Of the total sample, 52.6 percent experienced touching or exposure, and 22 percent experienced penetration.

Women with a history of childhood sexual abuse did not differ on meeting the criteria for PTSD from women without such a history ( $\chi^2 = 2.91, p < .1$  for the touching scale;  $\chi^2 = 1.23, p > .2$  for the penetration scale). However, as can be seen in table 3, women with a history of childhood sexual abuse did have (for both less severe and severe subscales) significantly more PTS symptoms than women without a history of childhood sexual abuse ( $t(331) = 3.18, p < .01$  for the touching scale;  $t(329) = 3.84, p < .01$  for the penetration scale). Hypothesis 3 is thus partially supported.

Women with a history of childhood sexual abuse had a higher average of depressive symptoms than did women with no such history ( $t(369) = 3.21, p < .01$  for the touching scale;  $t(367) = 2.88, p < .01$  for the penetration scale). The findings support hypothesis 3. The means are presented on table 3.

Women with a history of childhood sexual abuse had a significantly higher average of global psychological distress (for both scales) than their counterparts ( $t(367) = 4.11, p < .001$  for the touching or exposure scale;  $t(365) = 3.12, p < .01$  for the penetration scale—see table 3). Thus, our findings support hypothesis 3.

*Intimate Partner Abuse and Psychological Distress (Hypothesis 4)*

No significant differences were found between abused and nonabused women in meeting PTSD criteria ( $\chi^2 = 1.07, p > .2$ ). However, abused women had a higher average of PTS symptoms than did nonabused women ( $t(335) = 3.55; p < .01$ ). Findings are presented in table 4.

We examined the association between PTS symptoms and intimate partner abuse after controlling for childhood sexual abuse (two subscales: touching or exposure and penetration) and drug use (either a combined scale of polydrug use or a combined scale of injection drug use). A univariate analysis of variance on PTS symptoms as the dependent variable, intimate partner abuse as the independent variable, and a history of childhood sexual abuse (both scales) and combined drug

Table 3

LEVELS OF POSTTRAUMATIC STRESS DISORDER, GLOBAL PSYCHOLOGICAL DISTRESS, DEPRESSION, AND SUBSTANCE ABUSE AMONG WOMEN WITH AND WITHOUT A HISTORY OF LESS SEVERE AND SEVERE CHILDHOOD SEXUAL ABUSE

TYPES OF DIAGNOSES	LESS SEVERE CHILDHOOD SEXUAL ABUSE (Touching Scale; <i>n</i> = 199)		NO SUCH HISTORY ( <i>n</i> = 172)		SEVERE CHILDHOOD SEXUAL ABUSE (Penetration Scale; <i>n</i> = 83)		NO SUCH HISTORY ( <i>n</i> = 286)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	PTS symptoms	15.01	(12.92)	10.70	(11.42)	17.67	(13.35)	11.57
PTSD diagnosis	31.6%	(59)	23.1%	(34)	32.9%	(26)	26.5%	(67)
Global psychological distress	.92	(.73)	.64	(.57)	1.00	(.82)	.73	(.62)
Depressive symptoms	.98	(.89)	.70	(.78)	1.09	(1.00)	.79	(.81)
Drug use (continuous scale)	4.0	(5.37)	4.11	(6.22)	3.18	(4.44)	4.30	(6.10)
Drug use (yes/no)	63.3%	(126)	56.4%	(97)	61.4%	(51)	59.4%	(170)
Injection drug use (continuous scale)	.98	(2.56)	1.22	(3.19)	.87	(2.16)	1.17	(3.05)
Injection drug use (yes/no)	21.6%	(43)	18.6%	(32)	24.1%	(20)	19.6%	(56)

NOTE.—PTS = posttraumatic stress; PTSD = posttraumatic stress disorder. The yes/no entries reflect dichotomized scales based on the continuous drug abuse scales presented above. The numbers in the table represent the percentage of those who used any kind of drugs in any frequency in the past 6 months.

use as covariates was conducted. Results show that even after controlling for polydrug use and a history of childhood sexual abuse, abused women had more PTS symptoms than nonabused women ( $F(1,320) = 4.92$ ,  $p < .05$ ). The same pattern emerged when the injection drug use (continuous scale) replaced the polydrug use in the analysis ( $F(1,320) = 7.84$ ,  $p < .01$ ). Thus, findings supported the study's hypothesis 4 that abused women would have significantly more PTS symptoms even after controlling for the potential confounding effects of childhood sexual abuse and current drug use than would their nonabused counterparts.

Abused women had a higher average of depressive symptoms than did nonabused women ( $t(376) = 4.08$ ,  $p < .01$ ; see table 4). Findings from the univariate analysis of variance suggest that after the effects of history of childhood sexual abuse and drug use are controlled for, women in abusive relationships reported more depressive symptoms ( $F(1,357) = 10.53$ ,  $p < .01$  for the polydrug use measure;  $F(1,357) =$

Table 4

LEVELS OF CHILDHOOD SEXUAL ABUSE, POSTTRAUMATIC STRESS DISORDER, GLOBAL PSYCHOLOGICAL DISTRESS, DEPRESSION, AND SUBSTANCE ABUSE OF ABUSED WOMEN, NONABUSED WOMEN, AND THE TOTAL SAMPLE

TYPES OF TRAUMAS OR DIAGNOSES	ABUSED ( <i>n</i> = 158)		NONABUSED ( <i>n</i> = 220)		TOTAL SAMPLE ( <i>n</i> = 378)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Childhood sexual abuse (touching)	2.19	(2.31)	1.69	(2.16)	1.90	(2.23)
Childhood sexual abuse (penetration)	.46	(.89)	.32	(.69)	.22	(.42)
Drug use (continuous scale)	5.03	(5.89)	3.30	(5.53)	4.03	(5.74)
Drug use (yes/no)	69.0%	(109)	53.6%	(118)	60.1%	(227)
Injection drug use (continuous scale)	1.22	(2.98)	.99	(2.75)	1.08	(2.85)
Injection drug use (yes/no)	23.4%	(37)	18.2%	(40)	20.4%	(77)
PTS symptoms	15.99	(13.24)	11.16	(11.70)	13.26	(12.61)
PTSD diagnosis	31.3%	(46)	26.2%	(50)	28.4%	(96)
Global psychological distress	1.01	(.75)	.65	(.58)	.80	(.68)
Depressive symptoms	1.07	(.92)	.71	(.78)	.86	(.86)

NOTE.—PTS = posttraumatic stress; PTSD = posttraumatic stress disorder. The yes/no entries reflect dichotomized scales based on the continuous drug abuse scales presented above. The numbers in the table represent the percentage of those who used any kind of drugs in any frequency in the past 6 months.

3.99,  $p < .05$  for the injected drug use measure). These findings support hypothesis 4.

Abused women reported a higher average of global psychological distress than did nonabused women ( $t(374) = 5.28, p < .01$ ). (See table 4 for the means.) After controlling for history of childhood sexual abuse and drug use (polydrug or injection drug use), women in abusive relationships had more global psychological distress ( $F(1,355) = 17.11, p < .01$  for the polydrug use;  $F(1,355) = 21.83, p < .01$  for the injection drug use) than those not in abusive relationships. Thus, our findings support the study's hypothesis 4.

## Discussion

The current study examines the associations among intimate partner abuse and psychological distress, PTSD, childhood sexual abuse, and current drug use among a random sample of women enrolled in methadone treatment. Two theoretical frameworks guide the study: the cognitive theory of stress and coping (Lazarus and Folkman 1984; Folkman et al. 1993) and the comprehensive health-seeking and coping paradigm (Nyamathi 1989; Nyamathi, Keenan, and Bayley 1998). Generally, the study's hy-

potheses are supported. Women who reported current intimate abuse by their partner also reported higher levels of current polydrug use. More PTS symptoms, depression, and global psychological distress were found among polydrug users than among nonusers. Women with a history of childhood sexual abuse showed more PTS symptoms, depression, and global psychological distress than women without a history of childhood sexual abuse. Finally, women who were recently abused by their main intimate partner had more PTS symptoms, depression, and global psychological distress, after childhood sexual abuse (mild and severe) and drug use (polydrug or injection) were controlled for, than did women who were not recently abused.

As opposed to the hypotheses, there were no significant differences between women who currently use polydrugs and their nonusing counterparts in meeting the criteria for PTSD. Women with a history of childhood sexual abuse as well as women who report current intimate abuse by their partner did not differ on meeting the criteria for PTSD from women without a history of childhood sexual abuse or current intimate abuse by their partner.

The study's findings expand on past evidence regarding the high prevalence of depression among abused women (Browne 1993; Gilbert et al. 1997) and among women with a history of childhood sexual abuse (Boudewyn and Liem 1995; Hien et al. 2000). They also support the associations between intimate partner abuse and psychological distress, even after controlling for the confounding effects of a history of childhood sexual abuse and drug use. Moreover, the findings strengthen previous theory (Lazarus and Folkman 1984; Nyamathi 1989) and empirical evidence (Carver and Scheier 1994; Schwarzer and Schwarzer 1996; Brook et al. 1999; Galaif, Nyamathi, and Stein 1999) regarding the maladaptive nature of the avoidance coping strategy. Specifically, based on the findings, it might be argued that the greater use of multiple drugs by recently abused women is an expression of the avoidance coping strategy, which is aimed at distracting oneself from the painful experiences of the abuse. The findings further suggest, however, that more frequent drug use is associated with poor mental health outcomes, including higher PTS symptoms, depression, and global psychological distress (see also Terry 1994; Stein and Nyamathi 1999).

Examining the findings using the cognitive theory of stress and coping and the CHSCP framework amplifies the importance of further examining the situations or external mechanisms that enable abused women to perceive more control over their abusive relationships as well as to use more adaptive coping strategies such as problem solving or reappraisal (i.e., changing the subjective meaning of the event—Mikulincer 1994; Schwarzer and Schwarzer 1996). Thus, instead of perceiving themselves as victims and feeling fearful, intimidated (Finkelhor 1995), powerless, worthless, inadequate, and unlovable (Murphy and Cascardi



1999), they might perceive themselves as empowered women, who control the situation and make decisions based on the complexity of their relationships with their partner.

### Implications for Practice

The findings of the study may have practice implications for women attending methadone maintenance treatment programs. For example, these findings suggest that assessment tools might ask about histories of trauma and intimate partner abuse, the ways that women cope with these situations, and associated mental health issues, including psychological distress, depression, and posttraumatic stress disorder. Counselors in drug treatment programs might also be trained to address these issues and to be aware of the relationship between current and previous trauma and current, situational, and lifetime maladaptive coping (Hien et al. 2000).

Intervention strategies based on this assessment encourage women to increase their sense of control over their daily activities and to emphasize the positive aspects of their behavior or their strengths. Professionals can assist them in maintaining control over their lives. This implication is in accord with previous research findings indicating that perception of high control and social support will lead to the adoption of more effective coping (Nyamathi 1989; Nyamathi, Keenan, and Bayley 1998). Moreover, these women may rely on avoidant coping strategies resulting from constricted coping choices and limited power, rather than merely resulting from dependent, helpless, or passive behavior (Stein and Nyamathi 1999). Thus, interventions that empower women are very important. Other intervention strategies may also include providing these women safety planning mechanisms, informing them how to obtain an order of protection, and referring them to shelters, appropriate mental health care, and other services. These alternative coping strategies could help abused women in methadone programs stay in treatment, prevent relapse, or better manage high-risk relapse situations (Brown and Wolfe 1994; Hien et al. 2000). These intervention approaches must consider a more holistic view of the women's situation (i.e., the past traumas of childhood abuse, psychological distress, and drug use).

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## 318 Social Service Review

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