

# Prison-Based Treatment for Drug-Dependent Women Offenders: Treatment Versus No Treatment†

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**Abstract**—This outcome study compared six- and 12-month return-to-custody data for 171 treatment participants and 145 nontreated general population inmates at the Central California Women's Facility (implementing a traditional TC program). Findings showed that there were no differences between the TC treatment group and the no treatment comparison group with regard to six- and 12-month return-to-custody rates (six-month: 16% vs. 16% and 12-month: 36% vs. 27%). The only significant difference in six-month return-to-custody rates was found between treatment-only participants (21%) and the treatment plus aftercare participants (6%). Treatment participants who participated in community-based aftercare were significantly less likely to be returned to custody compared with those who did not participate in aftercare. Multivariate analysis was also used to control for the large difference in psychological impairment between the two groups and other background factors related to reincarceration, while assessing the effect of treatment group status on return-to-custody. Findings indicated that treatment/no-treatment status was not significantly related to a six- or 12-month return-to-custody. However, success on parole was associated with participation in community-based aftercare. The lack of a prison-based treatment effect could be an indication that drug-dependent women offenders need gender-responsive treatment that is designed specifically for their complex needs.

**Keywords**—prison-based treatment, treatment outcome, women offenders

Social scientists and clinicians alike are becoming increasingly aware of the rising number of drug-dependent women entering the nation's state and federal prison system due to the widespread use of incarceration for drug-related offenses. From 1995 to 2002 the nation's state prison population increased by 27%, and the nation's federal prison population increased by 71%, with increases in the number of incarcerated women being consistently larger than increases

in the number of incarcerated men (Harrison & Beck 2003). This rapid influx of women into the criminal justice system raises new issues for prison officials and other agencies governing their care. One issue is the increased demand for appropriate drug treatment programs for women within prison settings.

The therapeutic community (TC) treatment model has previously been shown to be an effective method

†This study is supported by an Interagency Agreement (Contracts #C97.355 & #C98.346) between the California Department of Corrections (CDC), the Office of Substance Abuse Programs (OSAP), and UCLA Integrated Substance Abuse Programs (ISAP). The findings and conclusions of this article are those of the authors and do not necessarily represent the official policies of the Department. The authors would like to thank David Garcia, Garo Hagopian, Meredith Patten, Rosa Lua, and Cora Garcia for their help with data collection, data entry, and study coordination. We would also like to thank Crystal Falconer and Ana Moore (the ISAP interviewers) for their help in obtaining outcome study and return to custody data. In addition, the authors wish to thank the program directors and their staff for their cooperation and support of data collection. We are grateful to Bubpha Chen and Joyce Dilworth at the California Department of Corrections and Rehabilitation, Office of Substance Abuse Programs for their support and

assistance for this project. Finally, we wish to thank the participants who agreed to be interviewed.

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of treatment for men (DeLeon 2000) and is the treatment modality that has received most attention from researchers. Thus, many TC programs have been incorporated into American prisons over the past two decades. The TC model was founded on the belief that drug abuse disorders affect the users' values, cognition, social skills, and general behavior. The TC provides a total environment in which transformations in the drug users' conduct, attitudes, and emotions are fostered, monitored, and mutually reinforced by the daily regimen (De Leon 2000). Because prison environments stress security and custody, the designs of prison-based TCs are modified versions of the community-based TC model. However, the goals of prison-based TCs remain the same as community-based TCs, and they are generally designed to operate in much the same way (Burdon et al. 2002; Inciardi 1996).

The extent to which prison-TC methods meet the treatment needs of drug-dependent women in prison is largely unknown (Messina & Prendergast 2004). A considerable amount of research over the past decade has focused on assessing the *treatment needs* of women offenders entering prison-based treatment, as compared to their male counterparts. Many of these studies have reported consistent findings among women offenders regarding their extensive histories of childhood trauma and abuse, interpersonal violence in adolescent and adult relationships, adolescent conduct disorders, addiction, homelessness, and chronic physical and mental health problems (Messina et al. 2006; Grella, Stein & Greenwell 2005; Pelissier & Jones 2005; Bloom, Owen & Covington 2004; Bloom, Owen & Covington 2003; Messina, Burdon & Prendergast 2003; Anderson, Rosey & Saum 2002; Pollock 2002; Langan & Pelissier 2001; Peters et al. 1997). Findings of severity of drug abuse problems and comorbid disorders among men and women have been less consistent, depending on the specific drug or psychiatric problems assessed (Pelissier & Jones 2005). Taken together, this body of literature indicates that women offenders entering treatment in prison- or community-based programs are at a substantial disadvantage compared with their male counterparts and are more likely than men to present greater challenges to treatment practitioners.

In-depth studies assessing *post-treatment outcomes* for drug-dependent women offenders are largely lacking from this growing body of research. In fact, the majority of the existing evaluations of prison-based treatment focus specifically on the programs for men (similar to community-based treatment evaluations). Yet, findings from studies of men cannot be generalized to women for several reasons. First, men and women have different pathways to crime and addiction (Brecht et al. 2003; Wasilow-Mueller & Erickson 2001; Hser, Anglin & Booth 1987) and continue to use drugs for different reasons (Bloom, Owen & Covington 2004; Covington & Surrey 1997). Women's patterns of drug abuse have been described as more socially embedded than men's and primarily revolve around interpersonal relation-

ships (Covington 1998; Blume 1992). In fact, women are frequently initiated to drug use by their male partners, and often continue to use drugs to cope with abusive relationships (Brecht et al. 2003; Owen 1998; Covington & Surrey 1997). Histories of sexual and/or physical abuse are also important preexisting conditions in subsequent addiction and criminality for women (Messina & Grella 2006; Grella, Stein & Greenwell 2005; Bloom, Owen & Covington 2004; Pollock 1998). Second, men and women tend to enter treatment for different reasons (Grella & Joshi 1999). Women cite family problems and health as motivation for entering treatment, while men are more likely to cite employment and legal issues (Hodgins, El-Guebaly & Addington 1997). Third, the resources and services available in women's correctional facilities may be different than those available to men because of the costs of providing these services, as well as the relative invisibility of the health needs of female inmates (Bloom, Owen & Covington 2004; Stoller 2000). The different pathways and patterns of drug abuse for men and women are considered to be directly related to the likelihood of treatment entry and recovery (Ashley, Marsden & Brady 2003; Grella & Joshi 1999).

The following literature review pieces together the available information on prison-based treatment outcomes for women and specific predictors of success.

#### PRISON-BASED TREATMENT OUTCOMES FOR WOMEN

A small body of literature has evaluated post-treatment outcomes for women who participated in prison-based TC treatment. However, the existing research is limited, and findings are sometimes contradictory (for a full review, see Messina & Prendergast 2004). For example, two studies found that women who participated in prison-based treatment had more success on parole compared with a no-treatment group of women inmates (Prendergast, Wellisch & Wong 1996; Wexler et al. 1990), whereas another study found there was no difference in outcomes between women in a prison treatment group versus women in a no-treatment group (Jarman 1993). Two other studies found that women who participated in prison-based treatment had post-release reductions in recidivism and drug use compared with a no-treatment group of women (Hall et al. 2004; Pelissier et al. 2001). However, a study by Wexler and colleagues (1990) found no difference in recidivism rates between treated and untreated women parolees. Moreover, Rhodes and colleagues (2001) conducted a three-year follow-up of the women in the study by Pelissier and colleagues (2001) and found that there was no evidence of long-term treatment effectiveness. Limitations of the existing research include reliance on bivariate comparisons within relatively small sample sizes, which does not allow for the control of preexisting differences between groups or proper power to detect treatment effects.

Two other studies directly explored specific predictors of treatment outcomes from women in prison-based treatment. Pelissier and colleagues (2003) reported correlates of success for 473 women who participated in prison-based cognitive behavioral treatment in a multisite federal prison evaluation. They found that a history of prior commitments and disciplinary actions during incarceration increased the likelihood of post-treatment drug use and recidivism for women. In addition, being Black increased the likelihood of drug use for women, and age at release from prison (older) decreased the likelihood of drug use. One additional factor was found to decrease post-treatment drug use among women: participation in mental health treatment.

Replicating the design of Pelissier's study, Messina and colleagues (2006) examined correlates of aftercare participation and recidivism among 4,386 women who participated in 16 prison-based TCs in California. Regression findings showed that time in prison treatment and community-based aftercare were related to a reduced likelihood of reincarceration for women, indicating the positive effect of continuous and long-term treatment episodes for women. However, psychological impairment was the strongest predictor of recidivism for women.

Some success in using the TC model to treat women in prison has been reported, but the ability of these programs to fully meet the specialized treatment needs of drug-dependent women offenders remains to be seen. Understanding the needs and recovery processes of drug-dependent women offenders is important to aid in the design of appropriate prison-based substance abuse programs for women offenders. The elevated histories of sexual/physical abuse, and the association between comorbidity and crime among women offenders (Teplin, Abram & McClelland 1996) have led many researchers, theorists, and clinicians to propose a need for treatment components that specifically address histories of trauma and abuse and the resulting mental health issues in addition to addiction and criminal thinking.

## COMMUNITY-BASED AFTERCARE TREATMENT

Previous findings from male offenders show that participation in community-based aftercare is an important factor associated with success for parolees (as measured by return-to-custody) (Burdon, Messina & Prendergast 2004; Knight, Simpson & Hiller 1999; Martin et al. 1999; Wexler et al. 1999a, b). This finding was also replicated in studies by Messina and colleagues (2006) and by Prendergast and colleagues (1996), where participating in aftercare treatment in the community was one of the primary predictors of success for women parolees.

The primary goal of the current study was to assess the ability of traditional prison-TC programs to meet the specialized treatment needs of drug-dependent women and to stop the cycle of drug abuse and crime through treatment and intervention. It compares baseline interview data from

a sample of drug-dependent women offenders who were paroled from a prison-based TC treatment program and other women offenders who were paroled from the same prison without having been in the treatment program.<sup>1</sup>

Based on the previous literature, we formulated one research question and one hypothesis:

- Research Question: Will women who participated in the prison-based TC program be less likely to have been returned to custody than women from a matched comparison group who did not participate in the TC program?
- Hypothesis: Participants from the prison-based TC program who received community-based aftercare treatment would be less likely to have been returned to custody than TC participants who did not receive community treatment.

## METHODS

### The CDCR Prison Treatment Expansion Initiative

Based on previous research in California testifying to the effectiveness of prison-based TCs (Prendergast et al. 1996; Jarman 1993; Wexler et al. 1990), the legislature and the California Department of Corrections and Rehabilitation (CDCR) began an initiative in the mid-1990s to expand treatment opportunities for inmates. As part of this initiative, the CDCR established TC treatment programs in designated housing units within many of its prisons, including all of the institutions that house women. This initiative included two five-year evaluation studies of the prison-based substance abuse programs (SAPs) within the California state prison system. The University of California, Los Angeles (UCLA), Integrated Substance Abuse Programs (ISAP) was contracted by CDCR to evaluate these programs, with contract management provided by CDCR's Office of Substance Abuse Programs. The two evaluation studies cover 16 SAPs in 10 prisons (eight male programs and seven female programs). These programs became operational between July 1998 and December 1999 and include participants at all levels of security (Level I-Minimum through Level IV-Maximum). Also, the California initiative includes a major aftercare component for graduates from the prison-based TC programs, which provides funding for up to six months of continued treatment (residential or outpatient services) in the community following release to parole.

The data for this study were collected as part of a smaller in-depth outcome evaluation at the Central California Women's Facility (CCWF) in Chowchilla, California. The UCLA Internal Review Board reviewed and approved all study procedures.

### Prison-Based TCs in California

CDCR contracts with community-based organizations experienced in the TC model to provide services in the prisons (i.e., Amity Foundation, Center Point, Inc., Civigenics

Inc., Mental Health Systems, Inc., Phoenix House, and Walden House). They provide between six and 24 months of TC treatment at the end of inmates' prison terms. SAP participants at CCWF are housed separately from those in the general inmate population and participate in the programs 20 hours per week on average. Characteristics of the prison-based TCs include: (1) activities that embody positive values that start a process of socialization; (2) treatment staff who provide positive role models (many are recovering addicts themselves); (3) an alternative concept of inmates that is usually much more positive than prevailing beliefs and attitudes held by correctional staff; and (4) a "voluntary" (i.e., women are mandated into the prison component and volunteer for treatment on release) aftercare component that provides funding for up to six months of community-based treatment.<sup>2</sup>

Although the TC curriculum was modified to be implemented within a correctional setting, the programs were not modified to be gender-responsive and still embodied traditional TC philosophies (e.g., relying on group dynamics and community to change behavior, peer confrontation, hierarchy, and mixed-gender staff). In fact, part of the UCLA ISAP process evaluation was to examine the extent to which the programs conformed to the traditional TC model of treatment. Feedback received from focus groups with both participants and treatment staff indicated that there is concern that SAP curriculums were repetitive and needed to incorporate more one-on-one counseling, as many participants had a difficult time discussing personal issues within a group setting—a basic component of the TC treatment (Burdon et al. 2002).

### Study Design

This outcome study involved collecting detailed interview data from SAP participants (*treatment group*) and general population inmates who did not participate in a treatment program (*comparison group*).<sup>3</sup> The sample frame for the comparison groups is limited to those inmates who had some self-reported indication of a substance use/abuse history, had less than 12 months remaining on their sentence, and who met treatment group matching criteria (e.g., race/ethnicity, age, education, controlling offense).

### Data Collection

Client-level baseline data were collected via face-to-face interviews with women who volunteered to participate in the study. All treatment group participants were interviewed at the time they entered the prison SAP (generally with six to 12 months remaining on their sentence). All comparison group interviews were conducted approximately six months prior to release from prison in order to have comparable post-prison follow-up. The baseline instrument is a slightly revised version of an instrument developed by the Institute of Behavioral Research at Texas Christian University (Broome et al. 1996). The instrument includes sections

on sociodemographic background, family and peer relations, health and psychological status, criminal involvement, in-depth drug use history, trauma history, and an AIDS-risk assessment. Administration time is approximately 70 to 90 minutes. The ISAP interviewers who administered this instrument had received training on its use, as well as on confidentiality procedures.

Records-based follow-up was conducted on all subjects using six to 12 month return-to-custody data collected in June 2004 from the the CDCR's Offender Based Information System (OBIS). The primary outcome measure was the percentage of offenders in the treatment and comparison group who were returned to custody within six months following release to parole. Twelve-month return-to-custody rates are also reported for a subsample of those who had a parole date prior to June 2003 (in order to be at risk for reincarceration for a minimum of one year).

The substance abuse programs provided the prison-based treatment admission and discharge dates and community-based admission and discharge dates to UCLA ISAP through disclosure agreements under CFR 42 Part 2, Section 2.52, which allows for these agencies to share these data with qualified evaluators. Community-based aftercare participation data were collected by the community-based treatment providers that delivered aftercare services to parolees from the prison-based TC SAPs. These community-based providers were required to report these data to the prison-based treatment providers.

Post-release return-to-custody rates came from OBIS and include incarceration for both parole violations and new charges. Inmates' psychiatric status came from the CDCR's Distributed Data Processing System. These systems are updated on a weekly basis, reducing the incidence of undetected crime or mental illness due to data entry lag times.

### Eligibility

Participation in the SAP programs is open to inmates who have a *documented* history of substance use or abuse (based on a review of their criminal backgrounds as documented in their inmate central files), and who have between six and 24 months left to serve on their current sentence. With few exceptions, those who meet these eligibility requirements are mandated into the treatment programs. However, due to treatment capacity limitations, some women who are eligible for SAP remain in the general population. There are also certain exclusionary criteria that preclude otherwise eligible inmates from entering the programs (e.g., gang-related enemy situations, documented membership in a prison gang, time spent in administrative segregation for violence or weapons charges within the last 12 months, and felony and Immigration and Naturalization Service holds). In addition, many of the women in the general inmate population may be ineligible for SAP participation because they do not have a documented history of drug-related charges;

however, these women often have extensive histories of substance abuse problems.

### Participants

The current study focuses on 171 women who participated in the SAP program at CCWF and 145 women from the general inmate population at CCWF. Women in the SAP program spent an average of 10.2 months in treatment prior to release from prison ( $SD = 4.07$ ) and 69% were classified as program graduates. All participants volunteered to be interviewed for the study; less than 3% of the women approached refused to participate. Participants in the study were predominately Black (34%) or White (30%), were 36 years old on average, and had completed approximately 11 years of education prior to their current incarceration. About half (49%) had never been married. Fifty-three percent were employed during the six months prior to their current incarceration, and they had on average 2.4 children. Participants also reported an average of 13 arrests in their lifetime. Study participants also reported similar substance abuse histories. This was primarily a stimulant-abusing population, as 33% reported methamphetamine as their primary drug problem (33% of the SAP women and 31% of the general population comparison group) and 33% reported cocaine/crack as their primary drug problem (32% of the SAP women and 35% of the general population comparison group).

### Co-Disordered Offenders

Although the SAP programs are primarily designed to serve drug offenders, the treatment populations also include participants with nondrug-related psychiatric disorders (e.g., including DSM-IV Axis I mood disorders and Axis II personality disorders). Within the CDCR, inmates with nondrug-related psychiatric disorders are classified as being in need of Correctional Clinical Case Management Services (or CCCMS). While these inmates are mentally disordered, their conditions are relatively stable and their symptoms are largely controllable through medication or psychotherapy sessions. Approximately 36% of the SAP program participants had a history of a CCCMS classification (i.e., the inmate met screening criteria for at least one Axis I or Axis II psychiatric disorder beyond a substance abuse disorder). (Inmates are assessed for psychiatric disorders at multiple time points during their incarceration; thus we opted to include women who "ever" had a CCCMS classification during their incarceration history and those who were still classified as CCCMS upon release from prison within our CCCMS group of offenders.)<sup>4</sup> We were unable to match general inmate participants on CCCMS classification, as all of the women who met requirements for this classification at the time of this study were participating in one of the two SAPs at CCWF.

### Data Analysis

The distributions of background characteristics and

return-to-custody rates by treatment group were evaluated using chi-square tests (for categorical variables such as treatment group) and *t* tests (for continuous variables such as age or total number of prior arrests). All bivariate analyses were considered to be statistically significantly different at the  $p < .05$  level. Following the bivariate data analyses, multivariate analyses (i.e., logistic regressions) were conducted to determine if treatment group was significantly related to six- or 12-month return-to-custody rates while controlling for the available background characteristics shown in Table 1. The model contained available control variables from the baseline interviews and from OBIS (i.e., age, education, race/ethnicity, marital status, employment status, CCCMS status, controlling offense, total number of days in aftercare treatment, and total number of prior incarcerations) and the treatment/no-treatment variable. The dependent variables (six- or 12-month return-to-custody rates) were dummy coded: 0 = No and 1 = Yes. All multivariate analyses were considered statistically significant at the  $p \leq .05$  level.

Adjusted odds ratios were used to interpret the statistically significant effect size at the  $p < .05$  level:  $[\text{Exp}(\text{Beta}) - 1] \times 100 = \text{adjusted odds ratio}$  (e.g., the percent increase or decrease in the odds of being returned to custody).

## RESULTS

### Bivariate Findings

Detailed client-level background characteristics for the treatment and no-treatment comparison groups are shown in Table 1. As a result of successful participant matching, there were no differences between the two groups with regard to their background characteristics prior to incarceration, including self-reported substance abuse history. The only significant difference between the treatment/no treatment comparison groups was that SAP women were significantly more likely to have been classified as CCCMS (36% vs. 0%,  $p < .05$ ).<sup>5</sup>

With regard to our research question, there were no differences between the SAP group and the comparison group with regard to six- and 12-month return-to-custody rates (six-month: 16% vs. 16% and 12-month: 36% vs. 27%). However, bivariate analyses cannot take into consideration the large difference in CCCMS status between the two groups, which could have masked a treatment effect, as previous findings have shown that those with co-occurring substance abuse and psychiatric disorders are most likely to recidivate (see Table 2).

Our research hypothesis was supported. Significant differences in six-month return-to-custody rates were found between SAP-only participants (21%) and the SAP plus aftercare participants (6%). Significant differences were also found between the no-treatment group (16%) and the SAP plus aftercare participants (6%). SAP participants who also participated in community-based aftercare were significantly less likely to be returned to custody compared with SAP only

**TABLE 1**  
**Background Characteristics: SAP Participants versus General Prison Population**

Program/Classification Level Group	(Female Level I-IV)		Total
	Treatment	Comparison	
Number of subjects	171	145	316
Mean number of prison treatment months	10.2	---	10.2
Background characteristics			
Age (Mean)	35.7	35.8	35.8
Education (Mean)	11.0	11.2	11.1
Ethnic breakdown			
White	33%	27%	30%
Black	36%	31%	34%
Hispanic/Mexican	19%	30%	24%
Other	12%	12%	12%
Marital status			
Never married	44%	54%	49%
Married/living as married	24%	14%	19%
Previously married/separated	32%	32%	32%
Employment six months prior to incarceration			
Odd jobs/part-time/full-time employment	56%	50%	53%
Primary drug problem			
None	3%	0%	2%
Alcohol	11%	9%	10%
Cocaine/Crack	32%	35%	33%
Methamphetamine	33%	31%	33%
Heroin	17%	17%	17%
Other	4%	8%	5%
Psychological status			
CCCMS (OBIS)	36%*	0%*	21%
Criminal justice history (Mean)			
Age of first arrest	21.0	22.2	21.6
Number of lifetime arrests	12.5	13.5	13.0
Number of prior incarcerations	10.4	10.4	10.4
Controlling offense			
Violent	16%	14%	15%
Property	41%	46%	43%
Drug	37%	34%	36%
Other	6%	6%	6%

\*Statistically significantly different at  $p < .05$ .

participants or compared with the no treatment comparison group (see Table 2).

### Multivariate Findings

Multivariate analyses were then used to control for CCCMS status and other background factors, while assessing the effect of treatment group status on six- or 12-month return-to-custody rates. Findings indicated that treatment/

no-treatment status was not significantly related to a six- or 12-month return to custody, after controlling for other factors (see Tables 3 & 4).

A return to custody within six months of parole was significantly associated with age and number of prior incarcerations. For each additional year in age, the odds of a six-month return to custody were decreased by 6.7% ( $p = .01$ ). In contrast, for each additional incarceration, the odds

**TABLE 2**  
**Return-to-Custody Rates (RTC)**

	CCWF (Female Level I-IV)					
	SAP Participants		Comparison Group			
	N	%	N	%		
Paroled <sup>a</sup>	171	98%	145	86%		
Six-month RTC	168	16%	125	16%		
12-month RTC <sup>b</sup>	107	36%	96	27%		
Time to RTC:	48		37			
< 6 months		56%		54%		
6-12 months		33%		41%		
> 12 months		10%		05%		
CCCMS RTC	53	25%	0	---		
Aftercare Participation and Return-to-Custody Rates						
	SAP Participants		SAP + Aftercare		Comparison Group	
	N	%	N	%	N	%
Six-Month RTC <sup>c</sup>	114	21*	54	6*	125	16*

Note: Percentages reflect the percent returned to custody of the total number of cases (N) in the analyses.

<sup>a</sup> Some of the outcome study participants had not paroled from prison prior to our obtaining outcome study OBIS data in March 2004.

<sup>b</sup> Twelve-month return-to-custody rates are reported for those who paroled prior to June 15, 2003 in order to be at risk for one year.

<sup>c</sup> Six-month return-to-custody rates comparing: SAP treatment only, SAP with aftercare, and no-treatment comparison group.

\*Statistically significantly different at  $p < .05$ .

of a six-month return to custody were increased by 21.2% ( $p < .01$ ). Total number of months in aftercare treatment approached significance ( $p < .06$ ). CCCMS status, race/ethnicity, marital status, prior employment, education, and controlling offense were unrelated to a six-month return to custody.

A return to custody within 12 months of parole was significantly associated with total number of prior incarcerations and total number of months in community-based aftercare. For each additional incarceration, the odds of a 12-month return to custody were increased by 29.8% ( $p < .01$ ). For each additional month in aftercare treatment, the odds of a 12-month return to custody were reduced by 1.5% ( $p < .06$ ). Prison-based treatment/no treatment status approached significance ( $p < .08$ ). CCCMS status, age, race/ethnicity, marital status, prior employment, education, and controlling offense were unrelated to a 12-month return to custody.

## DISCUSSION

Women in the criminal justice system are typically women with complex histories of abuse, trauma, and addiction. Moreover, abuse and addiction are the most common pathways to criminal behavior for women. The primary goal of this study was to assess the ability of prison TC programs

to meet the specialized treatment needs of drug-dependent women. The current findings show no significant differences in return-to-custody rates between women who participated in traditional TC treatment and a no-treatment comparison group of women inmates. However, when we focused our analyses on the difference in six-month return-to-custody rates between those who participated in community-based aftercare and those who participated in only prison treatment, a trend emerged. Success was evident for SAP participants who went on to participate in community-based aftercare (including those who participated in the FOTEP programs). These findings also support previous findings on the effectiveness of aftercare treatment from other reports on the California Treatment Initiative (Burdon, Messina & Prendergast 2004; Messina et al. 2004). Therefore, it seems reasonable to suggest that continued treatment in the community is critical to reducing reincarceration rates among drug-abusing women offenders.

### Implications for Prison-Based Treatment for Women

The findings from this prison-based treatment outcome study indicate that traditional TC treatment may not be the most effective treatment strategy for drug-dependent women offenders. Although there is a paucity of literature on the outcomes of prison TC treatment for women, the large

**TABLE 3**  
**Six-Month Return-to-Custody Rates (N = 292)**

Variable	B	S.E.	df	P value	Exp(B)
Treatment status [No prison treatment]					
SAP participant	-.264	.432	1	.542	
Psychological status [Non-CCCMS]					
CCCMS	.600	.495	1	.225	
Age	-.070	.027	1	.010	.933
Ethnicity			3	.093	
[Black]					
Latina	-1.369	.584	1	.019	.254
White	-.484	.488	1	.321	
Other	.030	.554	1	.957	
Marital status			2	.253	
[Never married]					
Married/Cohabiting	-.486	.519	1	.348	
Separated/Divorced/Widowed	-.799	.501	1	.111	
Employed 6-months prior to incarceration [No]					
Yes	.558	.384	1	.145	
Education (years)	.083	.093	1	.369	
Total number of incarcerations	.192	.073	1	.009	1.212
Controlling offense [Violent]			3	.607	
Property	.156	.535	1	.770	
Drugs	.079	.572	1	.890	
Other	-1.314	1.234	1	.287	
Months in Aftercare	-.022	.012	1	.062	
Constant	-.161	1.405	1	.909	

Note: [brackets] indicate reference category.

body of literature on the *specific needs* of drug-dependent women offenders is overwhelmingly consistent. The needs of drug-dependent women offenders are multifaceted and complex—the greater severity of women's drug abuse, past trauma, and physical and mental health problems compared with their male counterparts have led many researchers, theorists, and clinicians to propose gender-responsive treatment for women as a more appropriate and effective way to facilitate their recovery. Gender-responsive programs can provide a secure environment for women offenders to safely discuss histories of prostitution and physical or sexual abuse without fear of judgment (Bloom, Owens & Covington 2004; Grella & Joshi 1999). Gender-responsive programming focuses services on women's specific needs

and incorporates services that are implemented in a manner that promotes women's psychological growth (e.g., gender-specific environments, nonconfrontational and non-hierarchical programming) and helps them to discontinue the cycle of substance abuse and criminal behavior.

All offenders have similar categories of needs with regard to addiction, mental health issues, and vocational/educational training. However, research comparing drug-dependent women and men offenders suggests major differences in the degree of intensity of these needs and the ways in which they should be addressed by treatment programs to reduce the risk of relapse and recidivism (Messina et al. 2006; Covington 1998). (It should be noted that CDCR's Office of Substance Abuse Programs is currently

**TABLE 4**  
**Twelve-Month Return-to-Custody Rates (N=202)**

Variable	B	S.E.	df	P value	Exp(B)
Treatment Status					
[No prison treatment]					
SAP participant	-.740	.429	1	.085	
Psychological Status					
[Non-CCCMS]					
CCCMS	.308	.511	1	.547	
Age	-.032	.024	1	.173	
Ethnicity			3	.100	
[Black]					
Latina	-1.003	.552	1	.069	.367
White	-.089	.473	1	.850	
Other	.493	.571	1	.388	
Marital Status			2	.573	
[Never married]					
Married/Cohabiting	.520	.493	1	.292	
Separated/Divorced/Widowed	.174	.450	1	.699	
Employed 6-months Prior to Incarceration					
[No]					
Yes	.527	.379	1	.165	
Education (years)	-.124	.079	1	.118	
Total Number of Incarcerations	.261	.095	1	.006	1.298
Controlling Offense			3	.262	
[Violent]					
Property	.162	.579	1	.780	
Drugs	-.525	.608	1	.388	
Other	-1.037	.994	1	.297	
Months in Aftercare	-.015	.005	1	.006	.985
Constant	1.547	1.319	1	.241	

Note: [brackets] indicate reference category.

implementing new steps to incorporate gender-responsive programming into many of the prison-based SAPs for women.)

Consistent with previous findings from male offenders, our findings show that participation in community-based aftercare is an important factor associated with success for women parolees. As such, these findings could indicate the need to place greater emphasis on promoting aftercare to women paroling from prison-based treatment programs. Probably the most significant event in a women's incarceration is her release from prison. This event provokes feelings of deep emotion, stress, anxiety, fear, and uncertainty. Preparing the SAP participant for this event should be a primary part of any prison-based curriculum.

#### Study Limitations

We note that using return-to-custody rates as the outcome variable provides a very restricted view of success, although it is the outcome of greatest interest to the Department of Corrections and Rehabilitation. We were unable to conduct face-to-face follow-up interviews with the outcome study participants due to time and financial constraints. Such interviews (which were part of the original scope of these outcome studies) would have allowed us to assess a variety of other treatment outcomes such as reductions in drug use, current employment status, and psychological improvement. Additionally, we were limited to analyzing six- and 12-month recidivism rates. Results may differ if we had 24- or 36-month return-to-custody data available.

A second limitation of the outcome study comparison is the lack of random assignment. For practical and ethical reasons, random assignment of participants to either a treatment or control group is rare in evaluations of correctional programs. Thus, in the absence of a true experimental design, it is difficult to disentangle the effects of treatment from the characteristics of the inmates who were mandated into treatment (versus those who were not eligible for treatment).

Third, participation in aftercare programs following release from prison in California is voluntary. As a result, not all offenders who receive prison-based treatment opt for aftercare. It is likely that those who choose to continue to participate in community treatment—and do so for an extended period of time—differ from other prison treatment graduates who do not. Because the potential reasons for choosing aftercare are diverse, statistically controlling for these intrinsic differences was not possible. Nevertheless, the bias associated with self-selecting into community-based aftercare must be taken into account—if not in the analysis, then in the interpretation of the results.

Fourth, the sample size in this outcome study may not have been large enough to provide sufficient power to detect significant differences between the treatment and no-treatment groups at the conventional .05 level for the relatively small effects that are typically found in correctional substance abuse treatment programs (Pearson & Lipton 1999). For example, treatment/no treatment status approached significance in the multivariate analysis for a 12-month return to custody. It is highly likely that a larger sample size might have provided enough power to detect significant differences at the .05 level.

Finally, the findings of treatment program outcome studies such as the one reported here are out of date by the time they are reported. They apply to the programs as they existed at the time of subject recruitment. Programs change over time, usually for the better. Thus, it is not clear whether the results of the outcome study reported here can be generalized to the programs in their current form. In fact, several of the prison-based treatment providers in California have incorporated gender-responsive treatment approaches and specific women-focused curriculum into their programs over this past year (e.g., *Helping Women Recover* and *Beyond Trauma*, Covington 2003, 1999), and some of these providers are participating in an in-depth outcome evaluation with UCLA ISAP.

## CONCLUSION

Despite the rising numbers of women convicted of drug-related crimes and the progress that has been made in understanding the treatment needs of women, few initiatives have focused specifically on treatment of women offenders (Bloom, Owen & Covington 2004). Since published data

influence funding directions as well as public perceptions of treatment for women, the lack of in-depth data on specific treatment approaches for women offenders can effectively exclude their interests from critically important policy decisions.

Programs that focus on women's specific needs, guided by a theoretical understanding of women's psychological development, may be in a better position to meet these needs than a more generic treatment program using the traditional TC approach. Experimental studies are needed to address the gap in knowledge regarding substance abuse treatment for women offenders in general and to provide specific information on the types of services and approaches that should be emphasized when treating women in prison. Future studies should continue to explore and incorporate additional predictors of post-treatment outcomes that more appropriately reflect paths of recovery and success for women, such as improved relationships with children and sexual partners, reductions in domestic violence, living situations, and psychological status.

## NOTES

1. Many of the general population inmates in California are in need of substance abuse treatment services; however, they may not be receiving treatment during incarceration due to eligibility requirements and/or treatment capacity limitations.

2. Some of the parolees may also have participated in the Female Offender Treatment and Employment Program. The goal of the FOTEP project is to enable the successful reintegration of women parolees into the community, particularly with regard to reducing criminal behavior, substance use, and welfare dependence, and strengthening family relationships.

3. All of the treatment group interviews were conducted at the CCWF New Choice SAP. All of the comparison group interviews were conducted with women from the CCWF general population, excluding those who had previously participated in the New Choice or New Beginnings SAPs.

4. Screening for disorders varies across prisons, but most prisons use diagnostic interview and self-report instruments that address both substance abuse and psychiatric symptoms. Commonly used screening instruments include: Global Assessment of Functioning Score (above 50), Minnesota Multiphasic Personal Inventory-2, Millon Clinical Multiaxial Inventory-II, Level of Supervision Inventory, and Wide Range Achievement Test.

5. As is the case with many prisons in California, those in need of Clinical Case Management Services are often placed into the substance abuse programs because of co-occurring substance abuse and psychiatric problems.

## REFERENCES

- Anderson, T.B.; Rosay, A. & Saum, C. 2002. The impact of drug use and crime involvement on health problems among female drug offenders. *Prison Journal* 82 (2): 50-68.
- Ashley, O.; Marsden, M.E. & Brady, T.M. 2003. Effectiveness of substance abuse treatment programming for women: A review. *American Journal of Drug and Alcohol Abuse* 29 (1): 19-53.
- Bloom, B.; Owen, B. & Covington, S. 2004. Women offenders and gendered effects of public policy. *Review of Policy Research* 21 (1): 31-48.
- Bloom, B.; Owen, B. & Covington, S. 2003. *Gender-Responsive Strategies: Research, Practice, and Guiding Principles for Women Offenders*. Retrieved from <http://nrcic.org/pubs/2003/018017.pdf>.
- Blume, S. 1992. Women, alcohol and drugs. In: J. Lowinson; P. Ruiz; R. Millman & J. Langrod (Eds.) *Substance Abuse. A Comprehensive Textbook*. Baltimore: Williams & Wilkins.
- Brecht, M.L.; O'Brien, A.; von Mayrhauser, C. & Anglin, M.D. 2003. Methamphetamine use behaviors and gender differences. *Addictive Behaviors* 29: 89-106.
- Broome, K.; Knight, K.; Hiller, M. & Simpson, D. 1996. Drug treatment process indicators for probationers and prediction of recidivism. *Journal of Substance Abuse and Treatment* 13 (6): 487-91.
- Burdon, W.; Messina, N. & Prendergast, M. 2004. The California treatment expansion initiative: Participant characteristics, aftercare participation, recidivism, and predictors of outcome. *Prison Journal* 84 (1): 61-80.
- Burdon, W.; Farabee, D.; Prendergast, M.; Messina, N. & Cartier, J. 2002. Evaluating prison-based therapeutic community substance abuse programs: The California Initiative. *Federal Probation* 66 (3): 3-8.
- Covington, S. 2003. *Beyond Trauma: A Healing Journey for Women. Facilitator's Guide*. Center City, MN: Hazelden Press.
- Covington, S. 1999. *Helping Women Recover: A Program for Treating Substance Abuse. Facilitator's Guide—Special Addition for Use in the Criminal Justice System*. San Francisco: Jossey-Bass Publishers.
- Covington, S. 1998. *Women in Prison: Approaches in the Treatment of our Most Invisible Population*. Binghamton: Haworth Press.
- Covington, S. & Surrey, J. 1997. The relational theory of women's psychological development: Implications for substance abuse. In S. Wilsnak & R. Wilsnak (Eds.) *Gender and Alcohol: Individual and Social Perspectives*. Piscataway, NJ: Rutgers University Press.
- DeLeon, G. 2000. *The Therapeutic Community: Theory, Model, and Method*. New York: Springer Publishing Company.
- Grella, C. & Joshi, V. 1999. Gender differences in drug treatment careers among clients in the National Drug Abuse Treatment Outcome Study. *American Journal of Drug and Alcohol Abuse* 25 (3): 385-406.
- Grella, C.E.; Stein, J.A. & Greenwell, L. 2005. Associations among childhood trauma, adolescent problem behaviors, and adverse adult outcomes in substance-abusing women offenders. *Psychology of Addicted Behavior* 19: 43-53.
- Hall, E.; Prendergast, M.; Wellisch, J.; Patten, M. & Cao, Y. 2004. Treating drug-abusing women prisoners: An outcome evaluation of the Forever Free Program. *Prison Journal* 84 (1): 81-105.
- Harrison, P. & Beck, A. 2003. *Prisoners in 2002*. Bureau of Justice Statistics Bulletin. Washington, D.C.: U.S. Department of Justice, Bureau of Justice Statistics.
- Hodgins, D.; El-Guebaly, N. & Addington, J. 1997. Treatment of substance abusers: Single or mixed-gender programs? *Addiction* 92 (7): 805-12.
- Hser, Y.; Anglin, M. & Booth, M. 1987. Sex differences in addict careers. 3. Addiction. *American Journal of Drug and Alcohol Abuse* 13: 33-57.
- Inciardi, J.A. 1996. The therapeutic community: An effective model for corrections-based drug abuse treatment. In K. Early (Ed.) *Drug Treatment Behind Bars: Prison Based Strategies for Change*. Westport: Praeger Publishers.
- Jarman, E. 1993. *An Evaluation of Program Effectiveness for the Forever Free Substance Abuse Program at the California Institute for Women, Frontera, California*. Sacramento: California Department of Correction, Office of Substance Abuse Programs.
- Knight, K.; Simpson, D. & Hiller, M. 1999. Three-year incarceration outcomes for in-prison therapeutic community treatment in Texas. *Prison Journal* 79 (3): 337-51.
- Langan, N. & Pelissier, B. 2001. Gender differences among prisoners in drug treatment. *Journal of Substance Abuse* 13 (3): 291-301.
- Martin, S.; Butzin, C.; Saum, C. & Inciardi, J. 1999. Three-year outcomes of therapeutic community treatment for drug-involved offenders in Delaware: From prison to work release aftercare. *Prison Journal* 79 (3): 294-320.
- Messina, N. & Grella, C. 2006. Childhood trauma and women's health outcomes: A California prison population. *American Journal of Public Health* 96 (10): 1842-48.
- Messina, N. & Prendergast, M. 2004. Therapeutic community treatment for women in prison: Assessing outcomes and needs. In K. Knight & D. Farabee (Eds.) *Treating Addicted Offenders: A Continuum of Effective Practices*. New York: Civic Research Institute.
- Messina, N.; Burdon, W. & Prendergast, M. 2003. Assessing the needs of women in institutional therapeutic communities. *Journal of Offender Rehabilitation* 37 (2): 89-106.
- Messina, N.; Burdon, W.; Hagopian, G. & Prendergast, M. 2006. Predictors of prison TC treatment outcomes: A comparison of men and women participants. *American Journal of Drug and Alcohol Abuse* 32 (1): 7-28.
- Messina, N.; Burdon, W.; Hagopian, G. & Prendergast, M. 2004. One year return to custody rates among co-disordered offenders. *Behavioral Sciences and the Law* 22: 503-18.
- Owen, B. 1998. *"In the Mix": Struggle and Survival in a Women's Prison*. Albany: State University Press of New York.
- Pearson F.S. & Lipton D.S. 1999. A meta-analytic review of the effectiveness of corrections-based treatments for drug abuse. *Prison Journal* 79 (4): 384-410.
- Pelissier, B. & Jones, N. 2005. A review of gender differences among substance abusers. *Crime & Delinquency* 51 (3): 343-72.
- Pelissier, B.; Camp, S.; Gaes, G.; Saylor, W. & Rhodes, W. 2003. Gender differences in outcomes from prison-based residential treatment. *Journal of Substance Abuse Treatment* 24: 149-60.
- Pelissier, B.; Wallace, S.; O'Neil, J.; Gaes, G.; Camp, S.; Rhodes, W. & Saylor, W. 2001. Federal prison residential drug treatment reduces substance use and arrests after release. *American Journal of Drug and Alcohol Abuse* 42: 315-37.
- Peters, R.; Strozier, A.; Murrin, M. & Kearns, W. 1997. Treatment of substance-abusing jail inmates: Examination of gender differences. *Journal of Substance Abuse Treatment* 14: 339-49.
- Pollock, J. 1998. *Counseling Women Offenders*. Thousand Oaks: Sage Publications.
- Prendergast, M.; Wellisch, J. & Wong, M. 1996. Residential treatment for women parolees following prison-based drug treatment: Treatment experiences, needs, and services, outcomes. *Prison Journal* 76 (3): 253-74.
- Rhodes, W.; Pelissier, B.; Gaes, G.; Saylor, W.; Camp, S. & Wallace, S. 2001. Alternative solutions to the problem of selection bias in an analysis of federal residential drug treatment programs. *Evaluation Review* 25 (3): 331-69.
- Stoller, N. 2000. Improving access to health care for California's women prisoners. The California program on access to care. Available at <http://www.ucop.edu/cprc>.
- Teplin, L.; Abram, K. & McClelland, G. 1996. Prevalence of psychiatric disorders among incarcerated women. *Archives of General Psychiatry* 53: 505-12.
- Wasilow-Mueller, S. & Erickson, C. 2001. Drug abuse and dependency: Understanding gender differences in etiology and management. *Journal of American Pharmacological Association* 42 (1): 78-90.
- Wexler, H.K.; De Leon, G.; Kressel, D. & Peters, J. 1999a. The Amity Prison TC Evaluation: Reincarceration outcomes. *Criminal Justice and Behavior* 26 (2): 147-67.
- Wexler, H.; Melnick, G.; Lowe, L. & Peters, J. 1999b. Three-year reincarceration outcomes for Amity in-prison therapeutic community and aftercare in California. *Prison Journal* 79 (3): 321-36.
- Wexler, H.; Falkin, G.; Lipton, D. & Rosenblum, A. 1990. Outcome evaluation of a prison therapeutic community for substance abuse treatment. In: C. Leukefeld & F. Tims (Eds.) *Drug Abuse Treatment in Prisons and Jails*. NIDA Research Monograph #118. Rockville: U.S. Government Printing Office.