

2018

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Kathleen A. Moore

*University of South Florida*, kamoore@usf.edu

M. Scott Young

*University of South Florida*, syoung1@usf.edu

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## Scholar Commons Citation

Moore, Kathleen A. and Young, M. Scott, "*WeCan!* A 12-Month Evaluation of a Drug Court Treatment Program Serving Females Addicted to Prescription Drugs" (2018). *Mental Health Law & Policy Faculty Publications*. 908.

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# *WeCan!* A 12-month evaluation of a drug court treatment program serving females addicted to prescription drugs

**Kathleen A Moore, PhD\***; **M Scott Young, PhD**

Department of Mental Health Law and Policy, Louis de la Parte Florida Mental Health Institute, College of Behavioral and Community Sciences, University of South Florida

## \*Corresponding Author(s): Kathleen A Moore

Department of Mental Health Law and Policy, Louis de la Parte Florida Mental Health Institute, College of Behavioral and Community Sciences, University of South Florida, USA

Phone: 813-974-2295; Email: kamoore@usf.edu

## Abstract

Prescription drug abuse represents a national public health concern. This study reports on 12-month outcomes of a drug court treatment program for 102 female offenders addicted to prescription drugs. The program utilized two evidence-based treatment models (i.e., Motivational Enhancement Therapy/Cognitive Behavioral Therapy-12 and Seeking Safety). In addition, participants were required to attend monthly judicial reviews, weekly AA/NA groups, and two random drug screens per week. Participants were interviewed at baseline and 12-month follow-up. Analyses examined self-reported substance use, traumatic experiences, criminal justice involvement, readiness to change, and therapeutic alliance. Participants reported significant decreases in substance use, increased readiness to change, high therapeutic alliance, and significantly fewer arrest charges 12-months after enrollment compared to 12-months before intake. Results suggest that the drug court program was successful in reducing substance use and other ancillary measures for female participants with prescription drug abuse issues. Implications for policy and future research are discussed.

Received: Jun 07, 2018

Accepted: Sep 04, 2018

Published Online: Sep 10, 2018

Journal: Journal of Addiction and Recovery

Publisher: MedDocs Publishers LLC

Online edition: <http://meddocsonline.org/>

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## Introduction

In Florida, more than 60% of people arrested are either under the influence of drugs or alcohol or committing a crime to obtain narcotics [1]. However, many crimes committed by substance abusers are nonviolent [2]. Unfortunately, the criminal system is ill-equipped to address the underlying issues of substance abuse. All too often, untreated offenders are released from jail or prison only to commit more crimes related to drugs and alcohol, resulting in increased incarceration rates.

Of particular concern is the increase of prescription pain killer abuse among arrestees. Using data from the Arrestee Drug Abuse Monitoring Program (ADAM), the National Survey on Drug Use and Health (NSDUH) reported that of those arrested for serious offenses within the past year, illicit drug use was reported almost five times more frequently when compared to those not arrested within the past year [3]. When considering drug of choice, the nonmedical use of prescription drugs was



**Cite this article:** Moore KA, Young MS. *WeCan!* A 12-Month evaluation of a drug court treatment program serving females addicted to prescription drugs. *J Addict Recovery*. 2018; 2: 1007.

second only to marijuana. According to NSDUH, 28.8% of those within the sample who had committed serious criminal offenses within the past year reported nonmedical use of a prescription drug, compared to only 5.7% of those within the sample that had not been arrested within the past year.

Over the past decade, the availability of prescription drugs has increased dramatically [4]. While clinicians have an array of analgesics to treat pain, not all medical professionals are responsible when dispensing these powerful medications. From 2000 to 2006, there was an 80% increase in prescription drug abuse; it now ranks behind only marijuana as the most abused drug in the U.S [5]. Recent surveys indicate almost 7 million Americans currently abuse prescription drugs [6]. Also, prescription drugs are involved in more than 8,500 deaths per year, a 114% increase since 2000 [7].

There are several possible explanations for this dramatic upsurge in prescription drug abuse. Lax state oversight has allowed unregulated and fraudulent pain clinics to proliferate, particularly in Florida [8]. Primary care physicians also have recently expanded their prescribing of opioids [9] while pharmaceutical companies have introduced various new formulations [10]. Finally, there are few medication options for severe pain other than opioids [11].

### Prescription drug addiction in women

Powerful prescription painkillers pose a particular threat to women. Unlike heroin and other street drugs, which are mainly abused by men, women abuse prescription drugs at least as often as men [12,13]. Over the past decade, two factors have fueled this trend: (1) women are prescribed narcotic medications more frequently than men [14] and (2) women report painkillers as their primary drug of abuse more often than men [15]. As a result, the number of addicted women in the U.S. continues to swell [16,17]. Not surprisingly, a segment of this at-risk population becomes involved in crime related to their prescription drug use. Women who are arrested with prescription drug addictions are often charged with doctor shopping, possession of controlled substance, and drug trafficking. Facing additional stressors such as homelessness, unemployment, and inadequate child care, this population poses a daunting challenge for the traditional criminal justice system.

### Drug court alternative

The punitive nature of the legal system has historically been ineffective in meeting the needs of most substance-abusing offenders. Drug court represents a paradigm shift from punishment and incarceration to treatment, rehabilitation, support, and community reintegration [18]. The presiding judge, substance abuse treatment provider, and offender interact on a regular basis in a collaborative climate. This judicial model provides better monitoring of offenders compared to other forms of community supervision. In return for possible dismissal of charges or reduced probation time, the offender must adhere to his or her comprehensive and closely monitored treatment plan.

*Drug courts reduce criminal recidivism.* The results of this alternative legal model are impressive. Both primary studies and meta-analytic reviews indicate drug courts significantly reduce criminal recidivism [19,20,21]. However, the evidence base supporting the ability of drug courts to reduce criminal recidivism has been criticized for several methodological flaws [22]. Namely: 1) many drug court evaluations have been methodologically weak, with very few rigorous experimental or quasi-experimen-

tal studies conducted; 2) previous meta-analytic reviews have found that, among the most methodologically rigorous studies, weaker evidence supporting drug courts' effectiveness in reducing criminal recidivism has been obtained; and 3) the long-term duration of drug courts' effects on criminal recidivism is also unclear, with many studies only following participants for 12 months, which may or may not overlap with program participation.

The recent meta-analyses conducted by Mitchell and colleagues [22] on the ability of drug courts to reduce criminal recidivism address many of these gaps. Findings from this meta-analytic review support the ability of drug courts to reduce criminal recidivism. Although Mitchell and colleagues did replicate previous findings indicating higher effect sizes for less methodologically-rigorous evaluations, the authors note that all of the methodologically rigorous evaluations provided evidence of reduced criminal recidivism related to drug court participation. Also, reductions in criminal recidivism associated with drug court participation *increased* across longer durations of study follow-up, with the authors concluding that "the available research suggests that adult drug court participants have reduced recidivism during and after drug court treatment, and these effects appear to last at least three years post-drug court entry" (p. 68).

*Drug courts reduce substance use.* Whereas it is presumed that the reduction in recidivism rates for drug court participants is due to addressing their underlying substance use disorders, very few studies have directly examined participant substance use outcomes [23], specifically prescription drug abuse. Several studies have examined the effect of drug court participation on future drug use in general with positive effects [24,-30], but only two of the studies report baseline prescription drug use [24,29]. For example, Brewster [24] evaluated a drug court program and compared 184 participants to 51 comparable offenders. Baseline data revealed that prescription drugs were reported for 4.3% of the drug court sample vs. 2.0% of the comparison sample with the majority reporting cocaine and marijuana as primary drugs of choice. Outcome results found that rates of positive drug tests were lower for the drug court sample than for the comparison sample. The second study by Messina and colleagues [29] compared outcomes for 150 female offenders who participated in either a Gender Responsive (GR) drug court program (N = 85) or a Mixed Gender (MG) drug court program (N = 65). Opiate use was reported as primary drug of choice for 14% overall (9% GR group vs. 20% MG group). Outcome results revealed that both the GR and MG groups had significant reductions in drug and alcohol composite scores from baseline to follow-up. Although these findings are positive, they do not specifically address the issue of prescription drug use in female offenders.

### Program description

In 2008, the 6th Judicial Court received a three-year SAMHSA/CSAT grant to establish a drug court program serving female offenders with prescription drug abuse. The drug court program is titled *WeCan!* (Women Empowered to Cope with Addiction to Narcotics) and includes a judge; court-employed case managers; substance abuse treatment providers; defense attorneys; and the state Office of the Attorney General. Two local substance abuse treatment agencies provided 12 weeks of intensive outpatient treatment services using two Evidence-Based Program (EBP) models: Motivational Enhancement Therapy/Cognitive Behavioral Therapy-12 (MET/CBT-12,31) and

Seeking Safety [32]. All *WeCan!* participants received both EBP treatments regardless of which agency provided the treatment. The focus of MET/CBT-12 is to teach participants how to function without drugs, avoid situations that lead to drug use, and sensibly respond to relapses. Seeking Safety is a curriculum for participants with a history of trauma and substance abuse and focuses on coping skills and psychoeducation.

Aside from attending intensive outpatient addictions treatment, all *WeCan!* participants were required to attend monthly judicial reviews, weekly AA/NA groups, and were also subjected to one to two random drug screens per week. Although most participants completed the treatment component within three months, most remain in drug court for judicial reviews up to one year. Program eligibility criteria included: (1) prescription drug-related charges, (2) no history of violent criminal offenses, (3) no diagnosis of severe mental illness, (4) no alleged sexual perpetration, and (5) willingness to participate in drug court treatment.

### Current study

The current study examined preliminary treatment progress of female drug court participants struggling with prescription drug addiction. Specifically, this study utilized a 12-month longitudinal design to evaluate the following hypotheses: (1) Participants will reduce substance use from baseline to 12-month follow-up, (2) Participants will reduce criminal justice involvement from one year prior to *WeCan!* program enrollment to one year following *WeCan!* program enrollment, (3) Participants will increase motivation and readiness to change from baseline to 12-month follow-up, and (4) Participants will increase their therapeutic alliance with counselor at 12-month follow-up. Findings reported in this study are unique in that the *WeCan!* drug court program provided gender-specific treatment services exclusively for women struggling with prescription drug abuse issues.

### Method

#### Procedure

This study was approved by the institutional review board at the University of South Florida. Baseline and 12-month follow-up data were gathered from female offenders participating in the *WeCan!* drug court treatment program. Upon admission, participants completed a comprehensive intake interview that included several standardized measures. Participants then completed a follow-up interview 12-months following their entry to the *WeCan!* program. The 12-month follow-up interview included the standardized measures completed at baseline in addition to a questionnaire assessing client-therapist rapport. Interviews lasted approximately 90 minutes and were conducted in private.

#### Measures

*Global Appraisal of Individual Needs* [33]. The GAIN consists of eight core sections designed to record participant demographic and clinical characteristics. Participants completed the GAIN measure at baseline and at the 12-month follow-up interview in order to assess change over time.

The *GAIN Traumatic Stress Scale* (TSS) was used to measure participant past-year symptoms of traumatic experiences at baseline. The TSS is based on the Civilian Mississippi Scale for PTSD and contains 13 items producing a count of symptoms

or memories occurring in the past year related to participant trauma or other disorders of extreme stress [34]. In the current study, participant scores at baseline produced a reliability coefficient of 0.89. Given the different period of time assessed at the 12-month follow-up assessment (i.e., past 90 days versus past year), only baseline data for the TSS are presented.

The *GAIN Past 90 Day Substance Use* scale was used to measure changes in participant self-reported substance use from baseline to 12-month follow-up.

*Criminal justice involvement.* Information on participants' arrest history was collected from an online database of legal charges in Pinellas County for the 12-month period prior to baseline and the 12-month period following baseline. Arrest charges were categorized as: (1) possession charges, (2) DUI charges, (3) prescription charges, (4) doctor shopping charges, (5) trafficking charges, (6) property charges, (7) violent charges, and (8) other charges. "Other charges" were less commonly observed and included general criminal justice offenses such as violation of probation, failure to appear, and traffic violations.

*Circumstances, Motivation, and Readiness* [35]. The CMR is an 18-item instrument designed to (1) measure motivation and readiness for treatment and (2) predict retention in substance abuse treatment. Responses to each item are rated on a Likert scale ranging from (1) *Strongly Agree* to (5) *Strongly Disagree*. We utilized the instrument's *Total* score as well as the *Motivation* scale which assessed the internal recognition of the need to change. Prior research produced scores with internal consistencies of .60-.81 for each CMR subscale [36]. In the current study, participant scores at baseline produced Cronbach's alpha reliability coefficients of .91 (*Motivation*) and .84 (*Total* score).

*Working Alliance Inventory* [37]. The WAI is 12-item instrument that assesses participants' perspectives on the therapeutic rapport between participants and service providers. Each item is rated on a 7-point Likert response scale. The WAI contains three subscales measuring (1) the therapeutic bond, (2) client-provider agreement on therapeutic tasks, and (3) client-provider agreement on therapeutic goals. There is also a composite scale measuring overall working alliance. The instrument has been shown to produce reliable scores [38]. Meta-analytic studies of the WAI consistently document the relationship between a strong working alliance and positive client outcomes [39,40]. In the current study, the instrument was administered at the 12-month follow-up interview. Participant scores produced Cronbach's alpha reliability coefficients of .74-.92 on the three subscales and .95 for the overall working alliance.

#### Analyses

Simple descriptive statistics were used to depict participant demographic characteristics, past-year symptoms of traumatic experiences, and their working relationship with their counselor. Mc Nemar chi-square analyses were used to detect changes over time in dichotomous variables related to criminal justice involvement and abstinence from alcohol and drugs. Dependent t-tests were used to detect changes over time for continuous variables related to substance use, criminal justice involvement, and treatment motivation. Cronbach's alpha coefficients were computed to gauge the internal consistency of the standardized measures. Given the large number of comparisons, Bonferroni family-wise corrections were undertaken to control for Type I error inflation. All tests were two-tailed.

**Results**

**Participants**

Baseline information was collected from the first 159 female offenders who participated in the *WeCan!* program. Of these, 102 participants (64.2% of the total sample) also completed measures at 12-month follow-up. To ensure the representativeness of the follow-up sample, analyses were performed using Bonferroni family-wise corrections to examine potential baseline demographic and clinical differences between those completing only the baseline interview and those completing both the baseline and follow-up interviews. No significant differences emerged. In the absence of any significant differences, further analyses were restricted to the sample completing measures at both time points.

As can be seen in Table 1, the average age for participants was 30.7 years, ranging from 18 to 57. The majority of participants were Caucasian (98%) with 6.9% reporting Hispanic ethnicity. The majority (79.4%) had finished high school, with 43.1% reporting coursework beyond high school. Almost all (91.2%) were in a stable housing situation at baseline. Of those housed, 41.2% reported living in a home or apartment they owned or rented; 50% reported living in someone else’s residence. Nearly half of participants (48.1%) were employed at least part-time at baseline. Average monthly income for participants was \$887 (*SD* = \$877).

**Table 1:** Demographics characteristics (*n* = 102)

Characteristic	<i>n</i>	% or Mean ( <i>SD</i> )
Age (years)		30.7 years (9.5)
Race		
Caucasian	97	98.0
African-American	1	1.0
Native Hawaiian	1	1.0
Ethnicity		
Hispanic/Latino	7	6.9
Education (years)	-	12.9 (2.3)
Less than high school diploma	21	20.6
High school diploma	37	36.3
Some college	30	29.4
College diploma (Bachelor’s or higher)	2	2.0
Vocational technical, no diploma	1	1.0
Vocational technical diploma	11	10.8
Housing status		
Someone else’s apartment	51	50.0
Own/rent apartment	42	41.2
Institution	6	5.9
Other housed	3	3.1
Employment status		
Full-time (35 + hours a week)	32	31.4
Part-time	17	16.7
Unemployed, looking for work	40	39.2
Unemployed, disabled	4	3.9
Unemployed, not looking for work	9	8.8

Characteristic	<i>n</i>	% or Mean ( <i>SD</i> )
Past 90 day Income	-	\$887 (\$877)
Wages	-	\$526 (\$778)
Public assistance	-	\$112 (\$225)
Disability	-	\$25 (\$147)
Family/friends	-	\$119 (\$251)
Retirement	-	\$20 (\$199)
Other	-	\$28 (\$146)
Pregnant	2	2.0

**Participant past-year symptoms of traumatic experiences**

Table 2 presents participants’ self-reported past year symptoms of traumatic experiences. Of the thirteen indices of past-year symptoms of traumatic experiences measured by the *Traumatic Stress Scale*, participants reported experiencing an average of 2.5 symptoms, although there was a great deal of variability in the number of traumatic symptoms experienced by participants (*SD* = 3.2). Participants most commonly reported: 1) when something reminded them of the past, that they became distressed or upset (38.6%); 2) they felt guilty about things that happened because they felt like they should have done something to prevent them (36.6%); 3) they sometimes used alcohol or other drugs to help themselves sleep or forget about things that happened in the past (28.4%); 4) they had nightmares about things in their past that really happened (25.7%); and 5) they had a hard time expressing their feelings, even to people they cared about (24.8%). Just over a fifth of participants (21.8%) reported having any of the thirteen indices of past-year traumatic symptoms for three or more months.

**Table 2:** Participant past-year symptoms of traumatic experiences (*n* = 102)

GAIN Traumatic Stress Scale Items	<i>n</i>	% or <i>M</i> ( <i>SD</i> )
Participant past-year symptoms of traumatic experiences		
When something reminds you of the past, you became distressed or upset	39	38.6
You felt guilty about things that happened because you felt like you should have done something to prevent them	37	36.6
Sometimes you used alcohol or other drugs to help yourself sleep or forget about things that happened in the past	29	28.4
You had nightmares about things in your past that really happened	26	25.7
You had a hard time expressing your feelings, even to the people you cared about	25	24.8
Your dreams at night were so real that you awoke in a cold sweat and forced yourself to stay awake	19	18.8
You lost your cool and exploded over minor, everyday things	16	12.7
It seemed as if you have no feelings	11	10.9
You were frightened by your urges	9	8.9
You felt like you could not go on	7	6.9
You were afraid to go to sleep at night	7	6.9
When you thought of things you had done, you wish you were dead	1	1.0
Had any of the above problems for three or more months	22	21.8
Average number of TSS symptoms		2.5 (3.2)

**Participant criminal justice involvement 12-months before and after program enrollment**

Arrest data were available for all but one participant in the study sample. Additionally, two participants experienced their index offense more than 12-months before program enrollment. Criminal justice findings were re-analyzed excluding these cases with similar results obtained; however, the average number of charges experienced by participants in the 12-months prior to baseline increased due to absence of those cases with no charges for this time period. Further, it should also be noted that arrests which occurred during the *WeCan!* program did not result in termination from the program.

As can be seen in Table 3, a significantly smaller proportion of participants experienced an arrest and associated criminal charge(s) in the 12-months following *WeCan!* program entry (43.6%) compared to the 12-months prior to program entry (98.0%),  $\chi^2(1) = 51.16, p < .001$ . It should be noted the number of charges exceed the number of arrests due to the fact that an individual may have multiple charges during one arrest incident. There was a significant difference in the number of arrests,  $t(100) = 5.51, p < .001$ , experienced by participants in the

12-months after program entry ( $M = .70, SD = 1.0$ ) compared to the 12-months prior to program entry ( $M = 1.3, SD = 0.7$ ). Participants also had a significantly lower average number of charges over time,  $t(100) = 4.68, p < .001$ , experienced by participants at 12-months after program entry ( $M = 1.5, SD = 3.0$ ) compared to 12-months prior to program entry ( $M = 3.3, SD = 2.7$ ).

Most participants (67.3%) had a prior arrest for possession charges compared to only 19.8% 12-months after program entry,  $\chi^2(1) = 42.48, p < .001$ . There were several additional statistically significant reductions in other types of charges in the 12-months including: prescription fraud charges,  $\chi^2(1) = 5.79, p = .016$ ; DUI charges,  $\chi^2(1) = 9.10, p = .003$ ; trafficking charges,  $\chi^2(1) = 4.90, p = .028$ ; and doctor shopping charges,  $\chi^2(1) = 8.10, p = .004$ . Other decreases in the number of charges incurred by participants observed included the average number of possession charges,  $t(99) = 4.39, p < .001$ ; prescription fraud charges,  $t(100) = 2.88, p = .005$ ; DUI charges,  $t(100) = 3.30, p = .001$ ; doctor shopping charges,  $t(100) = 2.66, p = .005$ ; and property charges,  $t(100) = 2.23, p = .028$ .

**Table 3:** Participant criminal justice involvement 12-months before and 12-months following program enrollment ( $n = 102$ )

	Participants with arrest history data						Significance <sup>1</sup>
	12-months before program enrollment			12-months following program enrollment			
	<i>n</i> <sup>a</sup>	%	<i>M (SD)</i> <sup>b</sup>	<i>n</i> <sup>a</sup>	%	<i>M (SD)</i> <sup>b</sup>	
Total arrests	99	98.0 <sup>2</sup>		44	43.6		<b>&lt;.001</b>
			1.3 (0.7)			0.7 (1.0)	<b>&lt;.001</b>
Total charges	99	98.0		44	43.6		<b>&lt;.001</b>
			3.3 (2.7)			1.5 (3.0)	<b>&lt;.001</b>
Possession charges	68	67.3		20	19.8		<b>&lt;.001</b>
			3.3(2.7)			0.6 (1.6)	<b>&lt;.001</b>
Prescription fraud charges	16	15.8		6	5.9		<b>.016</b>
			0.3 (0.8)			0.1 (0.3)	<b>.009</b>
DUI charges	13	12.9		2	2.0		<b>.003</b>
			1.4 (1.5)			0.0 (0.2)	<b>.001</b>
Doctor shopping charges	11	10.9		1	1.0		<b>.004</b>
			0.4 (1.5)			0.0 (0.1)	<b>.005</b>
Trafficking charges	13	12.9		1	1.0		<b>.003</b>
			0.2 (0.7)			1.0 (0.6)	<b>.128</b>
Property charges	16	15.8		8	7.9		<b>.080</b>
			0.2 (0.6)			0.1 (0.4)	<b>.028</b>
Violent charges	7	7.1		1	1.0		<b>.077</b>
			0.1 (0.5)			0.0 (0.1)	<b>.060</b>
“Other” charges	22	22.0		23	23.0		<b>.999</b>
			0.4 (1.1)			0.6 (1.7)	<b>.264</b>

Note: Some missing data; valid percentages displayed.

1. A Bonferroni family-wise correction was made to control for likelihood of Type I error inflation. Specifically, the significance level for main study hypotheses related to proportion of participants experiencing any arrest and any charge as well as total number of arrests and total number of charges over time was adjusted to  $p = .0125$  (.05 / 4 tests). No Bonferroni family-wise corrections were made for subsequent exploratory analyses related to likelihood as well as total number of specific charges incurred by participants over time; subsequent exploratory analyses were evaluated at  $p < .05$ . Significant p-values are bolded.

2. Arrest data were accessible for all but one participant whose case was closed. It should be noted that some participants' ( $n = 2$ ) original offense(s) that brought them into drug court occurred more than 12-months before their entry into the Program; hence that information was not captured in this study's arrest data

a. Percentages represent the percent of participants with one or more of the arrests/charges indicated.

b. Measures of central tendency are based on the average number of arrests/charges experienced by the sample.

**Participant substance use in past 90 days**

Table 4 presents information of participants' self-reported substance use. *WeCan!* participants reported significant reductions in alcohol and illicit drug use from baseline to 12-month follow-up. At baseline, 60.8% of participants reported alcohol use within the past 90 days; 12-months later only 15.7% did ( $\chi^2 [1] = 37.50, p < .001$ ). At baseline, 79.4% of participants reported illicit drug use within the past 90 days; 12-months later only 18.6% did ( $\chi^2 [1] = 60.02, p < .001$ ). Specifically, 38.2% of participants reported marijuana use within the past 90 days at baseline vs. only 2.0% at 12-month follow-up ( $\chi^2 [1] = 35.03, p < .001$ ). In terms of prescription drug use, 46.1% of partici-

pants reported use at baseline; 12-months later only 6.9% ( $\chi^2 [1] = 38.03, p < .001$ ). Specifically, 38.2% of participants reported painkiller/opiate use within the past 90 days at baseline vs. only 5.9% at 12-month follow-up ( $\chi^2 [1] = 31.03, p < .001$ ). Additionally, 27.5% of participants reported anti-anxiety/tranquilizer use within the past 90 days at baseline vs. only 3.9% at 12-month follow-up ( $\chi^2 [1] = 18.89, p < .001$ ). There also were significant reductions for alcohol ( $t [100] = 4.17, p < .001$ ), marijuana ( $t [100] = 3.84, p < .001$ ), painkillers/opiates ( $t [100] = 3.94, p < .001$ ), and anti-anxiety/tranquilizers ( $t [101] = 2.92, p = .004$ ).

**Table 4:** Substance use change over time from baseline to 12-month follow-up ( $n = 102$ )

	Baseline		12-month		Significance <sup>1</sup>
	<i>n</i>	% or <i>M (SD)</i>	<i>n</i>	% or <i>M (SD)</i>	
<i>Percent of participants using past 90 days:</i>					
Alcohol	62	60.8	16	15.7	<b>&lt;.001</b>
Illicit drugs	81	79.4	19	18.6	<b>&lt;.001</b>
Marijuana	39	38.2	2	2.0	<b>&lt;.001</b>
Crack	6	5.9	3	2.9	.371
Cocaine	6	5.9	3	2.9	.505
Heroin	2	2.0	0	0.0	a
Prescription drugs	47	46.1	7	6.9	<b>&lt;.001</b>
Pain killers, opiates	39	38.2	6	5.9	<b>&lt;.001</b>
Anti-anxiety, tranquilizers	28	27.5	4	3.9	<b>&lt;.001</b>
Downers, sedatives	2	2.0	1	1.0	.999
<i>Number of days in past 90 using:</i>					
Alcohol		7.0 (14.4)		0.9 (3.3)	<b>&lt;.001</b>
Illicit drugs <sup>2</sup>					
Marijuana		6.2 (16.4)		0.3(3.0)	<b>&lt;.001</b>
Crack		0.6 (3.3)		0.1 (0.5)	.119
Cocaine		0.2 (1.2)		0.1 (0.5)	.368
Heroin		0.5 (4.5)		0.0 (0.0)	.289
Prescription drugs <sup>2</sup>					
Pain killers, opiates		10.9 (23.9)		2.0 (9.9)	<b>&lt;.001</b>
Anti-anxiety, tranquilizers		3.4 (11.2)		0.3 (2.0)	<b>.004</b>
Downers, sedatives		0.1 (1.0)		0.1 (1.4)	.909

Note: Some missing data; valid percentages displayed.

1. Two Bonferroni family-wise corrections were made to control for likelihood of Type I error inflation, separated by type of analyses (percentage of participants using specific substances in the past 90 days; number of days participants

reported using specific substances in the past 90 days). Specifically, the significance level related to the proportion of participants using specific substances was adjusted to  $p = .005$  (.05 / 10 tests); the significance level related to the number of days participants reported using specific substances was adjusted to  $p = .00625$  (.05 / 8 tests). P-values for significant tests are bolded.

2. It was not possible to create a composite variable regarding the number of days participants reported any type of drug use in the past 90 days.

a. Could not be computed as one variable was a constant

### Participant circumstances, motivations, and readiness (CMR)

As seen in Table 5, participants reported significantly increased motivation at 12-month follow-up ( $M = 22.9$  [ $SD = 5.6$ ]) than at baseline ( $M = 16.2$  [ $SD = 6.8$ ]),  $t(66) = -6.22$ ,  $p < .001$ . Participants also reported significantly higher total scores on the CMR from baseline ( $M = 54.0$ ,  $SD = 13.8$ ) to 12-month follow-up ( $M = 70.5$ ,  $SD = 23.9$ ),  $t(63) = -4.60$ ,  $p < .001$ .

**Table 5:** Participant scores on the Circumstances, Motivation, Readiness (CMR) scale from baseline to 12-month follow-up ( $n = 102$ )

	Baseline	12-month	Significance <sup>1</sup>
	<i>M (SD)</i>	<i>M (SD)</i>	
<u>Motivation</u>			
Internal recognition of the need to change	16.2 (6.8)	22.9 (5.6)	<b>&lt;.001</b>
<u>Total score</u>	54.0 (13.8)	70.5(23.9)	<b>&lt;.001</b>

Note: Some missing data; valid percentages displayed. Analyses are restricted to only the CMR subscale Motivation as well as the CMR Total Score scale given the poor reliability of scores produced for other CMR subscales (i.e., Circumstances 1, Circumstances 2, and Readiness for Treatment).

1. A Bonferroni family-wise correction was made to control for likelihood of Type I error inflation. Specifically, the significance level was adjusted to  $p = .025$  (.05 / 2 tests). P-values for significant tests are bolded.

### Participant ratings of therapeutic alliance

In conjunction with these findings, participants reported strong relationships with their court-appointed counselors. Participants reported positive working relationships regarding treatment task ( $M = 23.1$  [ $SD = 4.9$ ]), bond with their counselor ( $M = 22.8$  [ $SD = 6.5$ ]), treatment goals ( $M = 22.3$  [ $SD = 4.9$ ]), and overall working alliance with their counselor ( $M = 68.2$  [ $SD = 15.5$ ]).

### Discussion

This 12-month evaluation study of a therapeutic drug court tailored for female offenders with prescription drug abuse issues examined participant self-reported substance use and symptoms of traumatic experiences, criminal justice involvement, motivation and readiness to change, and therapeutic alliance. Results of this study supported the appropriateness of the treatment modality employed to address participant substance use. Specifically, the *WeCan!* program incorporated a treatment modality specifically tailored to deal with the relationship between substance abuse and trauma symptoms [32]. At baseline, participants reported high levels of self-reported past-year trauma symptoms and endorsed several items including using alcohol or drugs as a coping strategy. These results support the need for targeted interventions to provide trauma-informed care for substance use disorders.

*WeCan!* participants significantly reduced their criminal justice involvement over the course of their first year of participation when compared to the year prior to their *WeCan!* involvement. There was a significant decrease in the total number of participant arrests that occurred in the 12-months before pro-

gram entry compared to 12-months after program enrollment. In the 12-months prior to program entry, the most common arrest charge incurred by participants was drug possession. However, only a small percentage of participants had possession charges 12-months after program enrollment. Additionally, participants also had significant reductions in DUI, prescription fraud charges, doctor shopping, and trafficking charges. Results from this study documenting reduced criminal behavior for *WeCan!* participants are consistent with the large body of literature supporting the ability of drug courts to reduce participant criminal recidivism [22].

*WeCan!* participants also significantly reduced their levels of self-reported substance use across the 12-months after their program entry. This is impressive considering the length of treatment is approximately three to four months and reductions in alcohol and drug use decreased significantly at 12-month follow-up. This improvement included the substances most commonly abused by participants in the past: alcohol, marijuana, and prescription painkillers. This study adds to the small but growing body of literature supporting the ability of drug courts to reduce participant substance use.

Participants reported significantly increased motivation or internal recognition of the need to change at 12-month follow-up. Additionally, most participants were pleased with the therapeutic bond developed with program staff. They felt there was a shared client-counselor vision regarding therapeutic tasks and goals. These findings are particularly impressive given the potential for coercive relationships when engaged in the judicial system and support the professionalism of treatment providers.

It is likely that high participant motivation, strong working alliances, and a positive therapeutic environment all contributed to reduced substance use over the course of the study period.

### Limitations

Conclusions based on this program evaluation are restricted by the use of a pretest-posttest study design without a comparison group. Another limiting factor is the reliance on unverifiable, self-report data related to past substance use. This limitation is further compounded by the serious legal ramifications for non-compliance (e.g., self-reported drug use) faced by drug court participants. Finally, it is impossible to determine the long-term outcomes for *WeCan!* participants based on this study's 12-month follow-up. Future research should follow offenders for several years after program graduation.

### Conclusions

Study findings suggest that the *WeCan!* program is meeting programmatic goals for its target population of female offenders with prescription drug abuse issue. Increasing numbers of female offenders abusing prescription painkillers are burdening an already overtaxed legal system. Innovative programs like *WeCan!* offer a fundamentally different way of dealing with a problem that threatens the public health of many communities across the United States, especially in Florida. The significant reductions in substance use and criminal justice involvement suggest this type of program should be of particular interest to policymakers in these difficult economic and social times. Assuming future research replicates the positive findings of this study, specialized drug courts could help reshape the judicial system in the coming decades. While the cost of quality substance abuse treatment is high, the costs of ongoing addiction, incarceration, and criminal recidivism are much higher—both in dollars spent and lives lost.

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