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A New Gender-Based Model for Women's Recovery From Substance Abuse: Results of a Pilot Outcome Study

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Abstract: Despite repeated calls for gender-based recovery models for women, there has been a lack of empirical research on this topic. We thus sought to evaluate a women's manual-based substance use disorder recovery model in a pilot study. Participants were opioid-dependent women in a methadone maintenance treatment program who received 12 sessions of the gender-based model in group format over two months. Assessment was conducted before and after the intervention, with results indicating significant improvements in drug use (verified by urinalysis), impulsive-addictive behavior, global improvement, and knowledge of the treatment concepts. Patients' high attendance rate (87% of available sessions) and strong treatment satisfaction additionally support the potential use of this treatment model. Future research would benefit from larger samples and enhanced scientific methodology.

For decades, there has been a call for gender-based addiction treatment, particularly for women. Although women have a lower rate of substance use disorder (SUD) than men (1), in many domains they have greater SUD-related problems. Women have more SUD-related health problems and co-occurring mental disorders, higher death rates, a quicker course of

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addiction, and greater social isolation and stigma (2–4). Yet historically, SUD treatment was developed primarily for men.

We know of no empirical outcome evaluation of any SUD recovery model designed for women. We thus conducted a pilot study to evaluate *A Woman's Addiction Workbook* (5) in a sample of women with severe and chronic SUD. The workbook offers a gender-based approach to SUD recovery, focusing on themes and psychoeducation relevant to women.

METHOD

The study was conducted at an outpatient methadone maintenance treatment program (MMTP) on 8 opioid-dependent women, with diagnosis based on DSM-IV and positive urinalysis. Selection criteria were pending admission to the MMTP and willingness to participate in the study. Incentives were a free copy of *A Woman's Addiction Workbook* and expedited admission to the MMTP. Participants stabilized on methadone for 3 weeks prior to the study, and all began the study treatment on the same day. They were randomly assigned to one of two clinicians (their primary clinical contact as well as study treatment group co-leaders), with four participants per clinician. One clinician was a master's-level male; the other was a female SUD counselor. Participants received 2 one-hour methadone-related individual sessions as part of the MMTP protocol. The only other professionally-led treatment were the study's 12 group sessions (each 1.5 hours) in 8 weeks (twice-weekly groups, except for 4 weeks at once-weekly). They were not referred to external treatments during the study.

Session topics represented one or more chapters from *A Women's Addiction Workbook*, which participants received before group. The session format was a check-in, topic from the workbook, check-out, and homework. The check-in was: "Since the last session... (1) Share one positive and one negative update about your recovery; (2) Any substance use? (3) Did you complete your homework? and (4) Share one idea you gained from the homework." Topics were adapted for group modality by having the group leaders summarize 2 or 3 main points from them. The check-out was: "Share one thing you got out of today's session." At study end, participants attended an exit interview.

Assessment. Measures included substance use (urinalysis and the Addiction Severity Index "lite" version) (6); functioning (BASIS-32) (7); psychiatric symptoms (Brief Symptom Inventory) (8); treatment alliance (Helping Alliance Questionnaire; HAQ) (9); global improvement

(Clinical Global Impressions Scale, patient version; CGIS) (10); cognitions (Beliefs About Substance Use) (11); coping (Coping Strategies Inventory; CSI) (12); satisfaction (Client Satisfaction Questionnaire; CSQ) (13); and knowledge of principles from *A Woman's Addiction Workbook* (using the book's questionnaire). On all measures higher scores indicate worse functioning, except for the HAQ, CSI, employment composite of the ASI, and knowledge test.

Measures were collected at study intake, and months 1 and 2 thereafter. Intake and month 2 had identical assessments; month 1 was just the ASI, CGIS, and HAQ. Supervised urine samples were collected randomly and without warning as verification of ASI data, approximately weekly. Patients gave 10–14 urine samples (M = 12.12) during the study.

Data Analysis. Outcome analyses were 2-tailed paired-sample *t*-tests for all variables that were available at 2 timepoints. For the ASI (the only measure at 3 timepoints), a repeated measures approach modeled the correlation between the pair of assessments per subject (equivalent to a paired t-test when complete data are available). The advantage of the repeated measures approach is that all subjects were retained in the model regardless of complete data. All subjects provide an estimate for average level at baseline, thus providing a full intent-to-treat analysis. Two ASI composite scores could not be calculated: legal and alcohol. The former was missing on some participants and thus, per ASI instructions, could not be calculated. On the latter, participants did not report any alcohol use. We suspect under-reporting of alcohol due to clinic policies on alcohol consumption (e.g., loss of take-home methadone privileges).

RESULTS

Sample Characteristics. Sociodemographic information was as follows, from the intake ASI. Average age was 34.88 years (SD = 8.69); 7 participants were Caucasian and one was Hispanic; most were unmarried (n = 5); and most were unemployed (n = 6), with 2 working part-time. All participants reported 30 days of drug problems, and the average number of days of psychiatric problems was 21.25 (SD = 12.75). Lifetime use of drugs indicated an average of 11.62 years for heroin (SD = 11.56), 12.63 years for cannabis (SD = 11.10), and 7.50 years for cocaine (SD = 4.07). Current SUD diagnoses (DSM-IV criteria) were as follows: all participants had opioid dependence; in addition, 6 had cocaine abuse, 3 cannabis abuse, and 1 each alcohol abuse and benzodiazepine abuse; every client had 2 SUD diagnoses, and 3 had 3 SUD diagnoses.

Outcome Results. Table 1 provides a summary of outcome results. Overall, improvements were found on the variables most directly related to the content of the workbook: ASI drug composite, urinalysis, knowledge of the workbook concepts, and impulsive-addictive behavior (a BASIS-32 sub-scale). Also, the general measure CGIS was significant. Scales of more peripheral or related areas were not significant, but all were in the direction of improvement based on means (e.g., ASI composites for psychological problems, family, legal, medical, and employment; all BASIS-32 subscales other than impulsive-addictive behavior; and Beliefs about Substance Use).

Table 1. Outcome results

Measure	Intake Mean (SD)	Month 1 Mean (SD)	Month 2 Mean (SD)	Across time t^1
Addiction Severity Index				
Drug composite	.34 (.05)	.32 (.05)	.25 (.08)	−4.75**
Family composite	.54 (.30)	.46 (.24)	.54 (.25)	1.17
Psychological composite	.52 (.27)	.53 (.21)	.46 (.28)	−1.06
Employment composite	.68 (.18)	.58 (.28)	.60 (.29)	.55
Medical composite	.18 (.37)	.26 (.39)	.18 (.33)	−1.32
Clinical Global Impressions Scale	−	2.57 (.54)	1.79 (.57)	5.28**
Beliefs about Substance Use	1.25 (.87)	−	.66 (.47)	1.80
Basis-32				
Impulsive-addictive subscale	.85 (.77)		.31 (.34)	2.52*
Depression-anxiety subscale	1.46 (.87)	−	1.15 (.68)	1.10
Daily living skills subscale	1.42 (.79)	--	.91 (.47)	1.53
Psychosis subscale	.25 (.27)	−	.25 (.27)	.00
Relation to self and others subscale	1.57 (.67)	−	1.32 (.78)	.91
Overall mean	1.17 (.55)	−	.82 (.39)	1.82
Knowledge Test				
Multiple choice	.42 (.12)	--	.59 (.15)	−4.25**
True/false	.52 (.13)	−	.66 (.15)	−3.60*

[1] t-values represent paired t-tests for data available at 2 timepoints, and estimate of fixed effects over time for data available at 3 timepoints (see Data Analysis section).

*$P < .05$.

**$P < .005$.

Notes: (1) All t-tests are for paired samples.

(2) On all measures in this table, higher scores indicate worse functioning, except the ASI employment composite and the Knowledge Test.

(3) All are means across all items in the scale unless otherwise indicated.

Verification of Drug Use Data. Weekly random urinalysis verified self-reported drug use on the ASI. For month 1, of the 32 possible comparisons (i.e., 8 patients × 4 drug types), 93.75% were accurate. For month 2, of the 32 comparisons, 84.38% were accurate.

Treatment Attendance. Participants attended an average of 9.88 groups (range 8–12). Percent attendance was 87% of available groups (SD = .10).

Treatment Satisfaction. On the CSQ, scaled 1 to 4, the mean at month 2 was 3.49 (SD = .36). On the HAQ, scaled 0 to 4, the mean at month 1 was 2.84 (SD = .56) and at month 2 was 3.12 (SD = .62). Comments from participants at the exit interview included: "There are a lot of issues that affect women differently than men . . . I felt more comfortable talking about issues men just would not understand;" "If I didn't have that book, I would have been back out there [using drugs] in a heartbeat;" "When I was read- ing the material I swear this woman [author] was talking at me when she wrote this book . . . [It] gave me reasons into why I do what I do and how I can change the things that I do." The most common suggestions were to make the treatment longer and include discussion of parenting.

DISCUSSION

This study appears to be the first outcome study of a gender-focused, manual-based substance abuse recovery model for women. Despite numerous calls for women's gender-based substance abuse treatment (2–4), there has been an absence of empirical research using manual- based models.

   This pilot study evaluated an existing model, titled *A Woman's Addiction Workbook* (5). The workbook was modified for group co-led therapy while remaining faithful to the book. Patients completed readings and exercises from the workbook, but on a time-limited schedule of 12 group sessions. We also sought a sample of opioid-dependent women in a community-based methadone treatment program to test its impact in a naturalistic treatment setting, and among women with severe and chronic SUD.

   Results indicated significant improvements from intake to 2 months later on key variables most related to the treatment: the ASI drug com- posite, impulsive-addictive behavior, global improvement, and knowledge of the workbook concepts. The ASI drug composite was, moreover, veri- fied with random urinalysis. Other variables, despite being nonsignificant over time, were largely in the direction of improvement based on means.

Given the small sample and high severity of the sample, the results are particularly encouraging and suggest that future trials may be warranted. Patients' high attendance rate (87% of available sessions) and treatment satisfaction additionally support the potential use of this model.

The study benefited from rigorous intake SUD diagnoses, methadone stabilization prior to study treatment, a lack of treatment other than the experimental group (plus 2 methadone-related individual sessions required by the MMTP), the use of standardized assessments, and some minority representation (12.5%). Weaknesses, however, were the pilot nature of the trial: no control, one group cohort, a small sample, the inability to analyze alcohol or legal problems, and no follow-up.

Some modifications to the treatment might be helpful in future projects. The women wanted more focus on parenting and a longer treatment. Also, it might be useful to evaluate which book chapters are most helpful. The session check-in could also be shortened to allow more time for discussion of the material. Future research could compare the workbook alone to the therapy group version of the workbook in this project.

Results of this study are highly encouraging, but preliminary. With women's SUD rate rising over time and at increasingly younger ages (5), there is a serious need to refine and test promising models that might improve women's recovery.

ACKNOWLEDGMENT

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