Relationship Between Patient Satisfaction and Methadone Treatment Outcomes

S. M. Kelly [1], R. P. Schwartz [1], K. E. O'Grady [2], B. S. Brown [1, 3]

[1] Friends Research Institute, [2] University of MD, College Park, [3] University of North Carolina, Wilmington

BACKGROUND

- Although methadone treatment programs have higher retention rates compared to other treatment modalities, there remains considerable room for improvement.
- Greater treatment retention is associated with better patient outcomes.
- Patient satisfaction surveys, widely used in health care delivery systems, may provide useful data for improving patient retention and outcomes.

PURPOSE

To examine the relationship between methadone patients' treatment satisfaction at three months post-admission and their 3-month treatment outcomes and 6- and 12-month treatment retention.

METHODS

Participants:

- 294 opioid-addicted women and men recruited for a study of entry and engagement in methadone maintenance treatment in Baltimore, MD upon admission to one of six methadone maintenance programs.

Procedures:

- Participants were interviewed at baseline and again at 3 months post-baseline.

Measures:

- Addiction Severity Index (ASI; McLellan et al., 1980)
- TCU Client Evaluation of Self and Treatment Form (CEF; Joe et al., 2002)

Statistical Analysis:

- Internal consistency reliabilities, simple Pearson product-moment correlations, one-way ANOVAS, cross-tabulations, logistic regression analysis, and linear regression analysis.

Supported by NIDA R01 DA 015842

Corresponding author: skelly@frisrc.org

The authors report no conflicts of interest.

RESULTS

Table 1. Sample demographics (N = 294)

Variable	*n* (%)	Mean (*SD*)
Gender		
Male	154 (52.4%)	
Female	140 (47.6%)	
Ethnicity		
African American/other	229 (77.9%)	
Caucasian	65 (22.1%)	
Married	67 (22.8%)	
Age		41.5 (8.1)
Years of Education		11.3 (1.6)

Table 2. 3-month Client Evaluation Form scales means, standard deviations, and internal consistency reliabilities (Cronbach's α) (N = 294)

Variable	Mean	*SD*	Cronbach's α
Treatment Needs	16.2	4.1	.77
Treatment Satisfaction	26.8	4.2	.72
Counselor Services	43.9	7.5	.93

Note: Treatment Needs includes five 5-point Likert-type items with 5 indicating the most positive rating; scale range: 5 – 25. Treatment Satisfaction includes seven 5-point Likert-type items with 5 indicating the most positive rating; scale range: 7 – 35. Counselor Services includes eleven 5-point Likert-type items with 5 indicating the most positive rating; scale range: 11 – 55.

Table 3. Simple Pearson product-moment correlations of 3-month CEF scales with 3-month ASI composites and 3-month drug use and illegal activity in the past 30 days (N = 294)

	CEF scales at 3 months		
Variable	Treatment Needs	Treatment Satisfaction	Counselor Services
ASI composites (at 3 months)			
Medical	.082	-.062	-.077
Employment	.100	.156**	.029
Alcohol	.094	-.055	.006
Drug Use	.121*	-.141*	-.129*
Legal	.126*	-.173**	-.148*
Family/ Social	.135*	-.058	-.044
Psychiatric	.136*	-.046	-.018
Past 30 days items (at 3 months)			
Days of heroin use	.108	-.196**	-.145*
Days of cocaine use	.131*	-.151**	-.174**
Days of illegal activity	.160	-.116*	-.065

*p < .05; **p < .01

Table 4. Results of logistic regression analyses of 3-month drug testing results and 3-month CEF scales (N = 271)

Variable	Odds ratio	95% CI (Lower, Upper)
Treatment Needs		
Heroin-only positive drug test	1.044	(.917, 1.188)
Cocaine-only positive drug test	.970	(.910, 1.033)
Positive for either heroin or cocaine	1.033	(.967, 1.104)
Positive for both	1.131*	(1.024, 1.248)
Treatment Satisfaction		
Heroin-only positive drug test	1.100	(.923, 1.311)
Cocaine-only positive drug test	1.012	(.938, 1.311)
Positive for either heroin or cocaine	.971	(.896, 1.052)
Positive for both	.887*	(.798, .986)
Counselor Services		
Heroin-only positive drug test	1.012	(.917, 1.117)
Cocaine-only positive drug test	.980	(.939, 1.024)
Positive for either heroin or cocaine	.976	(.932, 1.022)
Positive for both	.992	(.938, 1.049)

*p < .05

Note: The concomitant variables (covariates) in all models were: age, gender, ethnicity (Caucasian *v.* African American/other), marital status (married *v.* not married), years of education, Treatment Needs, Treatment Services, and Counselor Services. Also, N = 271 because urine test results were missing for 12 participants due to incarceration and 11 participants due to refusals/missing data.

Table 5. Results of linear regression analyses of number of days in treatment at 6 and 12 months and 3-month CEF scales (N = 294)

Variable	*b*	*SE*	*p*
Days in treatment at 6 months			
Treatment Needs	-1.219	.679	.073
Treatment Satisfaction	1.868	.830	.025
Counselor Services	.560	.461	.226
Days in treatment at 12 months			
Treatment Needs	-3.843	1.878	.042
Treatment Satisfaction	6.092	2.205	.006
Counselor Services	1.404	1.205	.245

Note: The concomitant variables (covariates) in all models were: age, gender, ethnicity (Caucasian *v.* African American/other), marital status (married *v.* not married), years of education. N = 262 for analysis of days in treatment at 12 months due to not all participants having had the opportunity to be in treatment for 365 days at the time of analysis. The mean number of days that participants were in treatment at the 6-month point was 157 (*SD* = 47.9). The mean number of days that participants were in treatment at the 12-month point was 281 (*SD* = 122.7).

Table 6. Results of one-way ANOVAs and chi-square goodness-of-fit tests comparing 3-month CEF scales and drug testing results for participants who dropped out of treatment before 3 months versus those who remained in treatment for at least 3 months.

Variable	Retained < 3 months (*n* = 41)	Retained > 3 months (*n* = 253)	Test Statistic	*p*
CEF scales				
Treatment Needs, mean (*SD*)	16.7 (7.1)	16.1 (4.0)	$F(1,292) = .761$	.38
Treatment Satisfaction, mean (*SD*)	24.3 (5.2)	27.2 (3.9)	$F(1,292) = 17.3$	< .001
Counselor Services, mean (*SD*)	40.6 (8.6)	44.4 (7.1)	$F(1.292) = 9.2$	.003
3-month drug test results				
Heroin-only positive drug test, *n* (%)	2 (6.5%)	13 (5.4%)	$\chi^2(1) = .056$	.813
Cocaine-only positive drug test, *n* (%)	10 (32.2%)	113 (47.1%)	$\chi^2(1) = 2.43$	.119
Positive for either heroin or cocaine, *n* (%)	24 (77.4%)	151 (62.9%)	$\chi^2(1) = 2.52$	.112
Positive for both, *n* (%)	12 (38.7%)	25 (10.4%)	$\chi^2(1) = 18.64$	<.001

Notes: n = 31 for the retained < 3 months group and 240 for the retained > 3 months group for drug test analyses because urine test results were missing for 12 participants due to incarceration and 11 participants due to refusals/missing data.

CONCLUSIONS

- Participants who were more satisfied with their counselors and treatment programs showed significantly less drug use and legal problem severity, and reported using significantly less heroin and cocaine in the 30 days prior to the 3-month assessment.
- Participants who reported greater satisfaction with treatment at the 3-month assessment were retained for significantly more days at 6 and at 12 months.
- Treatment programs should consider administering the CEF to their patients at 3 months post-admission to identify patients with low satisfaction scores who may be at risk of prematurely leaving treatment.
- Such patients may be amenable to interventions to improve their satisfaction and retention.

REFERENCES

Joe, G. W., Broome, K. M., Rowan-Szal, G. A., & Simpson, D. D. (2002). Measuring patient attributes and engagement in treatment. *Journal of Substance Abuse Treatment, 22*, 183-196.

McLellan, A. T., Luborsky, L., O'Brien, C. P., & Woody, G. E. (1980). An improved diagnostic evaluation instrument for substance abuse patients: The Addiction Severity Index. *Journal of Nervous and Mental Disease*, *168*, 26-33.