

Therapist Effects in a NIDA CTN Intervention Trial with Pregnant Substance Abusing Women: Findings from RCT and Provider Settings

S. J. Erickson¹, J. S. Tonigan², M. P. Bogenschutz²

¹Department of Psychology, University of New Mexico¹

²University of New Mexico Center on Alcoholism, Substance Abuse and Addictions (CASAA)²

INTRODUCTION

Two robust findings in substance abuse research are that evidenced-based treatments produce relatively positive outcomes and, even in manual-guided therapies, therapist effects are generally large (e.g., Najavitz & Weiss, 1994; PMRG, 1998). In the absence of treatment main effects (Winhusen, et al., in press), this study investigated whether treatment outcomes among pregnant substance abusers could be attributed to therapist effects.

METHODS

Participants: 200 outpatient pregnant substance abusers were randomized to TAU or MET for pregnant substance users (MET-PS) The assessments were conducted at baseline, 4 weeks, 1 month follow-up (FU), and 3 months FU. Ten therapists (5 TAU, 5 MET-PS) had 5 or more clients assigned to them, a minimum number of clients deemed essential for deriving stable estimates of therapist effects. This resulted in 91 participants seen by 10 therapists with complete data.

Measures:

Addiction Severity. The Addiction Severity Index-Lite (ASI-Lite) (McLellan et al., 1992) is a structured clinical interview that yields Alcohol (A) and Drugs (D) summary scores (including alcohol, heroin, amphetamines, cocaine, cannabis, and inhalants) both as a continuous (number of days substance use in past 30 days) and a dichotomous outcome variable (abstinence or non-abstinence corroborated with urine toxicology screening at end of treatment, 1 month FU, and 3 month FU).

Urine Toxicology. Urine samples were collected and tested for opiates, cocaine, methamphetamines, benzodiazepines, and marijuana at screening, post-treatment, and at the two follow-up visits.

Readiness to Change. The University of Rhode Island Change Assessment (URICA) (DiClemente & Hughes, 1990) was used to assess the participants' motivation to change their substance use behavior. The URICA was completed at baseline. A Readiness score utilized in previous research (Pantalon & Swanson, 2003) was used for the present study.

Revised Helping Alliance Questionnaire- Client version. The Revised Helping Alliance Questionnaire (HAQ-II; Luborsky, Barber, Siqueland, Johnson, Najavits, Frank, & Daley, 1996) is a self-report of the strength of the relationship between the clinician and the client. It was administered after the second session.

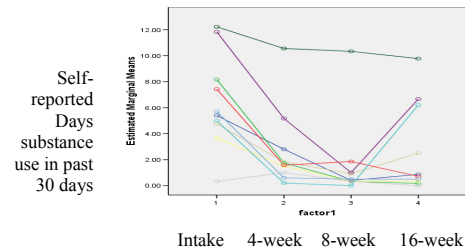
Client Impressions of the Therapist and Client Satisfaction. Four items were used to assess therapists' MET-congruent skillfulness as rated by clients (PMRG, 1997). Global satisfaction with therapist was based on a single item.

RESULTS

*Therapist effects were investigated by collapsing all therapists into a single group in a GLM repeated measures analysis. Covariates in the analysis included baseline ASI Drugs and Alcohol composite, pregnancy week, and readiness for change. Total number of days (past 30) of using any alcohol or drugs was the dependent measure (end of therapy, 1 month FU, and 3 month FU). The two between-subject factors were therapist ($n = 10$) and treatment group ($n = 2$). A therapist main effect was found ($F(8, 78) = 3.22, p < .003$) that accounted for 23% of the variance in client substance use during and after treatment. Therapist effects did not interact with time. Figure 1 displays the average self-reported client outcome per therapist during and after treatment. *Because the observed therapist effect may be the function of a single outlying MET-PS therapist, two additional GLM analyses were conducted, this time investigating therapist effects within treatment condition. In the

MET-PS condition (5 therapists and 53 clients) a strong therapist effect was found ($F(4, 45) = 3.90, p < .008$). This therapist effect was no longer present when the outlying MET-PS therapist was removed. Therapists within the TAU condition (5 therapists and 38 clients) did not differ from one another.

Figure 1. Self-reported Client Substance Use by Study Therapist



*Stepwise logistic regression was used to replicate the analyses using a binary measure of client outcome: total abstinence (yes/no corroborated with urine screen) across the 3 time points. No therapist main effect was found.

*The summary measure of complete abstinence across post-treatment and 1 and 3-month FU were regressed at step 1 on baseline values of the dependent measure (self-reported days substance use and urine screen). At step 2, weeks pregnant and readiness for change (both baseline) were entered. Step 3 included the therapist variable. The logistic regression investigating therapist effects (collapsing treatment) was not significant. Likewise, the logistic regressions within the MET-PS and TAU conditions were not significant.

*Hierarchical linear modeling was used to determine if there was individual variation in rates of substance use over time and whether such variation in trajectories was predicted by therapist assignment. In the unconditional model, the linear growth trajectory for substance use was significant and negative, ($\beta = -6.97, t(122) = -5.51, p < .001$). Significant individual variation in the rates of substance use was found, however ($\Pi^2(115) = 247.89, p < .001$). The quadratic slope was significant, indicating that following substance use reductions during treatment, rates of substance use accelerated after treatment, ($\beta = 1.15, t(122) = 5.07, p < .001$). Importantly, significant variability in the rates of use acceleration was also found, $\Pi^2(108) = 300.51, p < .001$. Inclusion of the therapist term in level 2 of the conditional model did not account for variation in substance use growth trajectories.

*In spite of limited evidence for a therapist effect, secondary analyses were conducted to investigate between therapist differences on the helping alliance as perceived by the client, client impressions of therapist behaviors, client overall satisfaction, and session attendance. Therapist differences on these client impressions and attendance did not explain the MET-PS therapist effect.

DISCUSSION

This study simultaneously investigated therapist effects in both controlled and naturalistic settings with a particularly vulnerable population.

*A therapist main effect was found across therapy conditions accounting for 23% of self-reported client substance use variance. This effect is larger than findings from other studies with general outpatient clinics (e.g., Lutz et al., 2007), but may be a function of the nature of the population (Najavits & Weiss, 1994).

*Our finding of a greater therapist effect within the MET-PS condition is counterintuitive and in contrast to prior findings (Crits-Cristoph et al., 1991), as one would anticipate greater homogeneity within a tightly controlled setting. *Although we identified therapist effects when substance use was a continuous variable, this was largely accounted for by one outlying (MET-PS) therapist who had been assigned patients with particularly high levels of baseline substance use. Our finding of an "outlying" therapist who accounts for therapist effects is similar to other studies (McLellan et al., 1988; PMRG, 1998), and is not limited to substance use therapists (e.g., Elkin et al., 2006; Luborsky et al., 1997). *Furthermore, we did not observe therapist effects when substance use was treated as a dichotomous variable (abstinence or non-abstinence), or when individual variation in substance use reduction was investigated with growth models (HLM). *Overall, we did not find large differences in the effectiveness of therapists, either between or within treatment conditions. One potential implication for MI training and monitoring is that it may be prudent to allow client outcomes, not just supervision and monitoring, to determine therapist efficacy. Of further clinical salience, TAU clients fared pretty well and demonstrated more homogeneous outcomes compared to MET-PS clients. This suggests that the typical treatment offered in a CTP, particularly when it is embedded in a more comprehensive medical and mental health services program, is reasonably efficacious.

REFERENCES

- Crits-Cristoph, P., Baranackie, K., Kurcias, J., Beck, A., Carroll, K., Perry, K., et al. (1991). Meta-analysis of therapist effects in psychotherapy outcome studies. *Psychotherapy Research*, 1, 81-91.
- Elkin, I., Falconnier, L., Martinovich, Z., & Mahoney, C. (2006). Therapist effects in the National Institute of Mental Health Treatment of Depression Collaborative Research Program. *Psychotherapy Research*, 16(2), 144-160.
- Luborsky, L., Barber, J.P., Siqueland, L. & Johnson, S. (1996). The revised Helping Alliance questionnaire (Haq-II). *Journal of Psychotherapy Practice and Research*, 5, 260-271.
- Luborsky, L., McLellan, A.T., Diguier, L., Woody, G.E., & Seligman, D.A. (1997). The psychotherapist matters: Comparison of outcome across twenty two therapists and seven patient samples. *Clinical Psychology: Science and Practice*, 4, 53-65.
- Lutz, W., Leon, S., Martinovich, Z., Lyons, J., & Stiles, W. (2007). Therapist effects in outpatient psychopharmacology: a three level growth curve approach. *Journal of Counseling Psychology*, 54(1), 32-39.
- McLellan, A.T., Kushner, H., Metzger, D., Peters, R., Smith, I., Grissom, G., Pettinati, H., & Argerious, M. (1992). The fifth edition of the Addiction Severity Index. *Journal of Substance Abuse Treatment*, 9, 199-213.
- McLellan, A.T., Woody, G., Luborsky, L., & Goehel, L. (1988). Is the counselor and "active ingredient" in substance abuse rehabilitation? An examination of treatment success among four counselors. *Journal of Nervous and Mental Disease*, 176, 432-440.
- Najavits, L. & Weiss, R. (1994). Variations in therapist effectiveness in the treatment of patients with substance use disorders: An empirical review. *Addiction*, 89, 679-688.
- Project MATCH Research Group (1998). Therapist effects in three treatments for alcohol problems. *Psychotherapy Research*, 8 (4), 455-474.
- Winhusen, T., Kropp, F., Babcock, D., Hague, D., Erickson, S.J., et al. (in press). Motivational enhancement therapy to improve treatment utilization and outcome in pregnant substance users. *Journal of Substance Abuse Treatment*.

ACKNOWLEDGEMENTS

This research was supported by NIDA's Clinical Trials Network.