Index ($F[3, 1192]=3.5, p<.05$), a measure of the frequency and intensity of recent drug use, the Substance Problem Index ($F[3, 1192]=4.7, p<.01$), a count of the number of dependence and abuse symptoms experienced in the past month, and the Anxiety Symptoms Index ($F[3, 1192]=3.5, p<.05$), a measure of recent anxiety symptoms. The same patterns of outcomes with nearly significant group by time interactions were found for property crimes ($F[3, 1192]=2.16, p<.10$), and somatic symptoms ($F[3, 1192]=2.2, p<.10$).

These results suggest that therapeutic community treatment for adolescent substance abusers is associated with greater reductions in subsequent drug use, drug use problems, and some psychological distress than are found among comparable youths who receive residential interventions of similar duration and intensity, but without intensive substance abuse treatment services. Because this study used a quasi-experimental design, rather than random assignment to treatment condition, we cannot unequivocally attribute the observed differences in treatment outcomes to the treatment programs themselves. Unmeasured group differences might explain differences in outcomes better than treatment effects. Nevertheless, because this study employed a seemingly successful case-mix adjustment strategy, it offers a more rigorous examination of treatment effects than has been the norm in evaluations of community-based treatments for adolescents.

ACKNOWLEDGEMENTS: This research was supported by the Center for Substance Abuse Treatment of the Substance Abuse and Mental Health Services Administration (grant # T111433).

ADVANCES IN FAMILY-BASED THERAPY FOR ADOLESCENT SUBSTANCE ABUSE

H.A. Liddle

Center for Treatment Research on Adolescent Drug Abuse, Department of Epidemiology and Public Health, University of Miami School of Medicine

Treatment research in the adolescent substance abuse specialty has evolved rapidly in the past decade. Family based therapies have been among the strongest performers in the outcome studies on adolescent drug abuse (Ozechowski & Liddle, 2000). Reviews have concluded that certain forms of family based therapies have produced the strongest available evidence in the amelioration of teen drug use (e.g., Williams & Chang, 2001). This presentation summarizes treatment findings on empirically supported family based treatment for adolescent drug abuse – multidimensional family therapy (MDFT) (Liddle, 2001).

The efficacy of MDFT was examined in comparison to individual adolescent treatment – Cognitive Behavioral Therapy (CBT). This study is noteworthy because of the comparison it provides - it is one of the first adolescent drug abuse studies comparing family therapy to a state-of-the-art psychotherapy. Additionally, this study has many design and analysis features expected in high quality intervention studies (e.g., DSM diagnosis on all subjects, manualized interventions representing commonly applied treatments (family and individual treatment) extensive manual adherence analyses, state of the art measures, multiple measures of adolescent outcome, state of the science statistical methods, true intent-to-treat design, comparison of two theory-derived strong treatments, and control of intervention dose). Two hundred twenty-four adolescents referred to a community clinic for substance abuse treatment were randomly assigned to one of the two treatments. The final sample was primarily male (81%), African American (72%), juvenile justice involved, and low income (e.g., 38% report total yearly family incomes of less than $10,000; 23% between 10,000-20,000). Self-reported adolescent drug use, and adolescent-reported and parent-reported externalizing and internalizing symptomatology, were assessed at intake and again at 6 and 12 months following treatment termination.

As we found in an earlier study (Liddle, et al. 2001), MDFT was successful in reducing marijuana use (linear slope effect $t = -3.94, p < .001$), drug involvement (linear slope effect $t = -5.82, p < .001$), as well as externalizing (parent report $t = -6.09, p < .001$; youth report $t = -4.05 p < .001$) and internalizing symptoms (parent report $t = -3.72, p < .001$; youth report $t = -2.46, p = .014$). Thus, the significant linear rate of change was present for each of the outcomes indicating that the shape of the change is linear and negative, suggesting improvement. CBT was likewise effective for drug involvement (linear slope effect $t = -3.19 p < .002$), and parent report of externalizing ($t = -2.81, p = .005$), and internalizing symptoms ($t = -3.27, p = .001$). However, the shape of the change was not linear over time.
for certain outcome variables. For example, the linear effect was not significant for marijuana use, adolescent report of externalizing symptoms and adolescent report of internalizing symptoms. For the CBT treatment group, there is a general leveling off in marijuana use after the 6-month follow-up.

After conducting the analyses within the treatment conditions, we examined the findings between conditions by employing a Level 2 equation. There were no significant differences between conditions in the rate of change over time with respect to marijuana use, parent report of the youth’s externalizing symptoms, and youth report of internalizing symptoms. A significant difference between treatment conditions for the linear slope was observed for the Personal Involvement with Chemicals scales of the PEI ($t = 2.29, p = .022$). Adolescents receiving MDFT in comparison to youth who received CBT continue to improve after termination as measured by the PEI, Personal Involvement with Chemical subscale. For externalizing symptoms, there was a significant difference between treatment conditions on parent’s report of their child’s externalizing symptoms ($t = 2.07, p = .035$) with adolescents receiving MDFT continuing to improve after termination, and adolescents in the CBT condition showing a leveling off of symptom reduction. Finally, with respect to internalizing symptoms, there was a significant between treatment difference with respect to adolescent report of their symptoms, with youth in MDFT condition reporting continued improvement after treatment; while adolescents in the CBT condition appear relatively stable after suspension of treatment ($t = 2.29, p = .022$). Lastly, we examined whether any demographic variables (adolescent age at intake, gender, race, criminal justice involvement, family structure, family income, mother’s education) added to Level 2 would act as an important covariate to treatment condition. None of these variables improved the explanatory power of the basic hierarchical models already discussed.

Considering the results as a whole leads us to conclude that in this comparison of two state-of-the-art treatments for adolescent substance abuse, as expected, both treatments emerged as at least somewhat efficacious. Both treatments reduced symptomatology from intake to termination across all three domains of functioning: drug use, externalizing symptomatology, and internalizing symptomatology. However, while both treatments were efficacious from intake to termination, the treatments show different long-term trajectories. The rate of improvement of symptoms between the two treatments is different such that only MDFT was able to maintain the symptomatic gain after termination of treatment. MDFT shows a significantly different slope from CBT suggesting that youth who received MDFT continued to evidence treatment improvement after termination. The advantage to MDFT, then, concerns its ability, in comparison to CBT, to retain the effects of treatment beyond the treatment phase.

It is important to recognize that these results were achieved with two theoretically different but standard psychotherapies. The models tested here are traditional psychotherapeutic interventions provided in standard service delivery formats. The treatments were both clinic based therapies providing once a week face-to-face therapy with no booster sessions. The fact that improvement in symptomatology was found in such modest dose treatments delivered to such a challenging patient population given its risk exposure and level of initial dysfunction is an important indicator of the promise of CBT (in terms of immediate therapy effects) and especially MDFT (in terms of immediate and continued effects at one year post termination) effects in the treatment of adolescent drug abuse.

Although the data show efficacy, there is room for improvement. The success of multiple systems focused therapies, with their intensity of service delivery, case management components, and home-based service delivery contexts, leads us to speculate that improved outcome would be achieved by integrating the psychotherapeutic models tested here into a more multisystemic service delivery context which includes case management, face-to-face therapy sessions of more than once per week delivered in the home if necessary. One of our current controlled studies is testing our most intensive and extensive version of MDFT developed to date.

REFERENCES

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