The effects of Brief Strategic Family Therapy (BSFT) on parent substance use and the association between parent and adolescent substance use

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HIGHLIGHTS
• BSFT was more effective than TAU in reducing alcohol use in parents.
• Reduction on parent alcohol use was mediated by improvements in family functioning.
• Adolescents whose parents used drugs at baseline responded better to BSFT.

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ABSTRACT

Background: The effects of family therapy for adolescent substance use on parent substance use have not been explored.

Objectives: To determine the effects of Brief Strategic Family Therapy® (BSFT®) on parent substance use, and the relationship between parent substance use and adolescent substance use.

Design: 480 adolescents and parents were randomized to BSFT or Treatment as Usual (TAU) across eight outpatient treatment programs.

Methods: Parent substance use was assessed at baseline and at 12 months post-randomization. Adolescent substance use was assessed at baseline and monthly for 12 months post-randomization. Family functioning was assessed at baseline, 4, 8, and 12 months post-randomization.

Results: Parents in BSFT significantly decreased their alcohol use as measured by the ASI composite score from baseline to 12 months ($\chi^2(1) = 4.46, p = .04$). Change in family functioning mediated the relationship between Treatment Condition and change in parent alcohol use. Children of parents who reported drug use at baseline had three times as many days of reported substance use at baseline compared with children of parents who did not use or only used alcohol ($\chi^2(2) = 7.58, p = .02$). Adolescents in BSFT had a significantly lower trajectory of substance use than those in TAU ($\beta = -7.82, p < .001$) if their parents used drugs at baseline.

Conclusions: BSFT is effective in reducing alcohol use in parents, and in reducing adolescents’ substance use in families where parents were using drugs at baseline. BSFT may also decrease alcohol use among parents by improving family functioning.

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1. Introduction

Brief Strategic Family Therapy® (BSFT®) is a manualized family intervention, developed over three decades of interplay between theory, research and practice, to correct family interactions associated with adolescent substance use and related behavior problems. BSFT (Szapocznik, Hervis, & Schwartz, 2003; Szapocznik & Kurtines, 1989) has been shown to be efficacious in engaging and retaining adolescents/family members in treatment (Coatsworth et al., 2001; Santisteban et al., 1996; Szapocznik et al., 1988), reducing adolescent drug use (Santisteban et al., 2003), and improving family functioning (Santisteban et al., 2003; Szapocznik et al., 1989). The effectiveness of BSFT was tested in a national multisite randomized clinical trial across eight community treatment centers within the National Drug Abuse Treatment Clinical Trials Network (CTN) (Robbins, Feaster, Horigian, Rohrbaugh, et al., 2011; Robbins et al., 2009). This study showed that when comparing BSFT to treatment as usual (TAU), trajectories of drug

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use did not differ over time across conditions from baseline through 12 month follow up. However, median drug use days at 12 months differed significantly between conditions, favoring BSFT (Robbins, Feaster, Horigian, Rohrbaugh, et al., 2011). In this same study, BSFT was found to be more effective than TAU in improving family functioning. More importantly, adherence to the BSFT model predicted engagement, retention, family functioning and drug use (Robbins, Feaster, Horigian, Puccinelli, et al., 2011). This paper is a secondary analysis of the BSFT effectiveness study. It examines the effects of BSFT in reducing parental substance use and evaluates the association of parental and adolescent substance use.

Numerous studies have shown that when parents use alcohol and other drugs, children are more likely to use drugs and are two to nine times more likely to become substance abusers later in life (Adger, 2000; Biederman, Faraone, Monuteaux, & Feighner, 2000; Catalano & Hawkins, 1996; Catalano, Gainey, Fleming, Haggerty, & Johnson, 1999; Johnson & Leff, 1999). Research reveals that maladaptive family interactions including inadequate parenting practices and poor parent–child relationships may result from parent substance use (Arria, Mericle, Meyers, & Winters, 2012; Barnard & McKeganey, 2004; Kamon, Stanger, Budney, & Dumenci, 2006; Keller, Cummings, & Davies, 2005) and are strongly associated with adolescent substance use (Brook et al., 2010; Weiss, Merrill, & Akagha, 2011).

Parenting interventions for substance using parents yielded positive results in parenting practices and parental substance use reductions, even when parental substance use was not directly targeted by the parenting intervention. Focus on Families (Catalano et al., 1999) which supplemented methadone treatment with family training and case management, resulted in improved parenting skills and reduced drug use in parents. Rotheram-Borus and colleagues’ coping skills intervention for HIV + parents and their adolescent children resulted in decreased unprotected sex, alcohol use, and contact with the criminal justice system in parents at two years post-intervention (Rotheram-Borus, Lee, Gwadz, & Drainim, 2001), and reduced negative family events, decreased externalizing and internalizing problems in adolescents, and improved problem solving in parents at four years (Rotheram-Borus et al., 2003). Thus parenting interventions with drug using parents have improved not only parenting, but also the parents’ substance use.

While the above interventions targeted parenting in substance using parents, other interventions have targeted adolescent substance use by improving family functioning more broadly. Improvements in family functioning are the target of family focused and family based interventions for adolescent substance use such as Functional Family Therapy (FFT-Alexander, Barton, Schiavo, & Parsons, 1976; Alexander, Pugh, Parsons, & Sexton, 2000) Multidimensional Family Therapy (MDFT-Liddle, 2002; Liddle et al., 2001), Multi Systemic Therapy (MST-Henggeler, Clemengpe, Brondino, & Pickrel, 2002; Henggeler, Pickrel, & Brondino, 1999; Sheidow & Henggeler, 2008) and BSFT. However, a search in MEDLINE, and PsyCINFO for randomized clinical trials including terms “multisystemic family therapy”, “functional family therapy”, “multidimensional family therapy”, and “parental drug use” found no publications on the effects of these models on parent substance use.

The proposed study aimed to build on a systematic program of research on BSFT. We hypothesized that 1) when compared to Treatment as Usual, BSFT would significantly reduce parental substance use, 2) such reductions would likely be mediated by improvements in family functioning, 3) adolescents whose parents use substances would be more likely to use drugs, and might be more difficult to treat and 4) that reductions in parent substance use would be associated with reductions in adolescent substance use.

2. Methods

2.1. Participants and design

This paper uses data from the BSFT effectiveness study conducted in the NIDA CTN. Four hundred and eighty adolescents and their families were randomly assigned to BSFT or TAU for the treatment of adolescent drug abuse in eight outpatient community treatment programs (CTPs) across the country. The study was approved by the University of Miami IRB, University of Arizona IRB, University of Cincinnati IRB, UCLA IRB and Universidad Central del Caribe IRB. Data was collected from October 2004 to January 2008 by Research Assistants, who were trained to competence and endorsed prior to start up. Data was captured in paper and pencil using teleforms and faxed to a centralized data management center. Quality assurance and data quality monitoring was conducted during the duration of the study. To enroll in the study, adolescents ages 12–17 had to self-report illicit drug use in the 30-day period preceding the baseline assessment or had to be referred from an institution (e.g., detention, residential treatment, courts) for the treatment of drug abuse. The adolescent had to assent and a parent or legal guardian had to consent to participate in the study. Adolescent substance use was assessed at baseline and at 12 monthly follow-up assessments. All additional adolescent and family assessments were completed at baseline and 4-, 8-, and 12-months post-randomization. Parent alcohol and drug use were assessed at baseline and at 12 months post-randomization.

2.2. Measures

2.2.1. Parent substance use

The Alcohol and Drug Use items from the Addiction Severity Index-Lite (McLellan, Luborsky, Woody, & O’Brien, 1980) were administered to the participating primary caregiving parent or parent-figure to assess current status of parent alcohol and drug use at baseline and 12 months post-randomization. The ASI is a standardized, semi-structured interview. The Alcohol and Drug Use items gather lifetime and current (previous 30 days) status information. Composite scores for drug and alcohol use were calculated following the ASI scoring manual (McGahan, Griffith, Parente, & McLellan, 1986).

2.2.2. Adolescent substance use

The Timeline Follow Back (TLFB; Sobell & Sobell, 1992) was used to assess adolescent substance use. This interview uses a calendar and memory prompts to facilitate the recall of daily substance use. At baseline, the 28-day period that preceded baseline was assessed. At each subsequent monthly visit, assessment of daily use covered the timeframe from the prior assessment to the current assessment, therefore covering 364 continuous days.

Urine drug screens were conducted at baseline and all monthly follow-up assessments using the SureStep Drug Screen Card 10A, immediately prior to the administration of the TLFB to improve the veracity of self-reported substance use. Substance use diagnosis was assessed with the computerized C-Diagnostic Interview Schedule for Children, Substance Abuse/Dependence Module (DISC-SA) developed by Shaffer, Fisher, Dulcan, et al. (1996). This interview is highly structured, designed for use by non-clinicians with good test–retest reliability (Schwab-Stone et al., 1996) and adheres tightly to DSM-IV criteria (Hasin et al., 1997). The DISC SA was used in this analysis to characterize adolescents whose parents used substances.

2.2.3. Family functioning

Family functioning was assessed using the Parenting Practices Questionnaire from the Chicago Youth Development Study (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996), and the Family Environmental Scale (FES; Moos & Moos, 1986). These measures were administered to parents and adolescents at baseline, 4, 8, and 12 months post-randomization. Internal consistency reliabilities of each of the subscales in this study ranged from .68 to .81. The FES Cohesion and Conflict scales were used. Internal consistency reliability estimates for the subscales in this study ranged from 0.61 to 0.78. A composite score was created from the Parenting Practices Questionnaire and FES to measure family functioning. 

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