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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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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.

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Contributors

Authors Viviana Horigian, and Daniel Feaster, elaborated the study question for these secondary analyses on a previous protocol on Brief Strategic Family Therapy. Maria Perez managed the literature searches and summaries of previous related work. Ahnalee Brincks and Daniel Feaster undertook the statistical analysis, and author Viviana Horigian wrote the first draft of the manuscript. Robbins and Szapocznik provided guidance for the discussion section. All authors contributed to and have approved the final manuscript.

Conflict of Interest

Author Jose Szapocznik is the developer of the BSFT model and has copyrighted the intervention. He is also the director for the BSFT training institute. The sponsor that supported this work is not affiliated with the model.

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.

Keywords

parent substance use; adolescent substance use; family therapy; effectiveness research

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, Santisteban, McBride, & Szapocznik, 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 et al. 2009; Robbins, et al. 2011a). This study showed that when comparing BSFT to treatment as usual (TAU), trajectories of drug 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 et al., 2011a). 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, 2011b). 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, & Feigher, 2000; Catalano & Hawkins, 1996; Catalano, Gaine, 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, & Draimin, 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 adolescents 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, Pickrel, & Brondino, 1999; Henggeler, Clingempeel, Brondino, & Pickrel, 2002; 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 adolescents 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

Parent Substance Use—The Alcohol and Drug Use items from the Addiction Severity Index-Lite (McLellan, Luborsky, Woody, & O'Brien, 1980) was 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).

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 and colleagues, 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.

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 with separate composites for youth ($\alpha = .90$) and parents ($\alpha = .91$) (described in Feaster et al., 2010).

Adolescent psychiatric comorbidity—The Diagnostic Interview Schedule for Children-Predictive Scales (DISC-PS; Lucas et al., 2001) was used to assess anxiety and depression symptoms and to identify probable presence of Simple Phobia, Social Phobia, Agoraphobia, Panic Disorder, Generalized Anxiety Disorder, Obsessive-Compulsive Disorder, and Major Depressive Disorder based on DSM IV criteria. The DISC PS has demonstrated excellent sensitivity and specificity compared to the full Diagnostic Interview Schedule for Children (Lucas et al., 2001). For these analyses it was used to understand baseline clinical characteristics of adolescents whose parents used substances.

2.3 Interventions

Forty nine therapists were randomized (BSFT, N = 20; TAU, N = 29). The majority of therapists had a master's degree (N = 34), followed by bachelor's (N = 8), doctorate (N = 5), certified addiction counselor (N = 1), and high school graduate (N = 1). No statistically significant differences in demographic variables were observed between therapists assigned to the BSFT condition and TAU.

Brief Strategic Family Therapy® (BSFT®) integrates structural and strategic theory and intervention techniques to address systemic (primarily family) interactions that are associated with adolescent substance use and related behavior problems. BSFT considers adolescent symptomatology to be rooted in maladaptive family interactions, inappropriate family alliances, overly rigid or permeable family boundaries, and families' tendency to believe that a single individual (usually the adolescent) is responsible for the family's troubles. BSFT assumes that transforming family interactions will help improve the youth's presenting problem. In the effectiveness study, BSFT consisted of 12 to 16 sessions. The majority of therapy sessions were expected to involve multiple family members. Sessions lasted an hour and a half, and location of services was flexible to avoid obstacles to the delivery of BSFT. Independent ratings of therapy sessions indicated that the mean rating for prescribed interventions in the BSFT model (M = 3.49; SD = 0.52) was above the minimal adherence threshold (3 = Fair/Adequate), and the total score was over 3 in 85% of these sessions.

Treatment As Usual (TAU) varied depending on the treatment programs at participating CTPs. TAU in CTPs included one or more of the following: individual and/or group therapy, parent training groups, non-manualized family therapy, and case management. CTPs providing weekly, manualized family therapy sessions were excluded. A pre-requisite for CTP participation was that their TAU had to minimally include at least 12-16 weekly scheduled sessions to ensure that differences in dose between BSFT and TAU were not the result of different planned treatment parameters.

2.5 Data Analysis

Hypothesis 1: BSFT would be more effective than TAU in reducing parental substance use—Generalized estimating equations (GEE; Hedeker & Gibbons, 2006) were used to determine changes in parental ASI alcohol and drug composite scores by treatment condition. Because the distribution of the alcohol and drug composite scores was non-normal, a Poisson distribution was employed in the analyses. The GEE method handles

the Poisson distribution well and offers a repeated measures approach to data that makes use of all available data, even with two assessments for parental substance use. The Poisson model compares the rates at which the outcomes occur, so we present the incidence rate ratio (IRR) of the alcohol or drug use scores from the ASI.

Hypothesis 2: Treatment effect on substance use would be likely mediated by improvements in family functioning—If the initial analyses uncovered significant treatment effects, the hypothesis that family functioning mediated the relationship between BSFT and parental substance use was to be explored next. The mediation effect was estimated by the product of the regression coefficient for family functioning regressed on treatment and the regression coefficient for parent substance use regressed on family functioning (MacKinnon, Lockwood, Hoffman, West & Sheets, 2002). Prodcin was used to estimate the resulting asymmetric confidence interval (MacKinnon, Fritz, Williams, & Lockwood, 2007).

Hypothesis 3: Adolescents whose parents used substances were more likely to use drugs, and might be more difficult to treat—Wilcoxon analyses were used to assess whether baseline adolescent substance differed if the parent used alcohol or drugs. This analysis is a non-parametric approach for comparing outcomes that do not fit a normal distribution, in this case adolescent substance use. Parents were classified into three categories based on their reported substance use at baseline. Group 1 included parents who did not report any drug or alcohol (no use; N=216). Group 2 included parents who did not report drug use, but did report alcohol use (alcohol only; N=198). Group 3 included parents who reported drug use (drugs N=66), some of which also reported alcohol use. Mixed model longitudinal analyses (Hardin & Hilbe, 2003) were used to assess for differences in the trajectory of adolescent substance use based on parental substance use group and treatment condition. The dependent variable was percent of days of adolescent substance use in the past 28 days. The logit transformation was used to address non-normality in the distribution of this variable. Finally, the mixed model approach employed orthogonal polynomials, which are transformations of the linear and quadratic terms in the model, to eliminate collinearity between the terms. This study tested differences in linear and quadratic trajectories, as including quadratic trajectories resulted in the best fit to the data. The intercept in these models represents the between-groups effect across time.

Hypothesis 4: Reductions in parent substance use would be associated with reductions in adolescent substance use—Mplus software (Muthen & Muthen, 1998-2013) was used. The quadratic growth curve with treatment status, an indicator for parental substance use at baseline and the interaction of these two factors with the linear and quadratic slope was estimated. To test the hypothesis we examined the correlations between the estimated slope of the growth curve at T12 with the observed change in parental alcohol use from baseline to the 12 month assessment. A multiple group model was then run to examine this correlation in the subgroup of parents who did and did not use substances at baseline.

3. Results

Demographics

Demographic characteristics of parents are presented in Table 1. The reporting parents were predominantly female and more than half the families had an income of less than \$30,000. Parent mean age was 43. With the exception of family income, there were no significant differences in the demographic variables nor treatment condition across the three parent groups. Income did exhibit a significant difference between the parent groups, with parents in Group 2 (alcohol only) reporting the highest percentage of parents in the >\$50,000 income category (32%) compared with 1% of parents in Group 1 and 17% of parents in Group 3.

A total of 327 parents completed the second assessment. Comparison of the parents who completed both the baseline and 12 month follow-up assessments versus the parents who only completed the baseline assessment revealed no statistically significant differences in treatment condition, parent substance use group, or demographic variables except for race/ethnicity: African Americans were the most lost to attrition.

The adolescent sample was predominantly male, enrolled in school and diagnosed with a drug abuse or dependence problem. Most adolescents came from a family with at least one biological parent. The sample was diverse and included sizeable percentages of Hispanic and African American adolescents. Demographic characteristics for adolescents are presented in Table 2.

Hypothesis 1—Baseline ASI alcohol and drug scores at baseline were not significantly different between BSFT and TAU. There was, however, differential change in parental alcohol scores over time by treatment status ($\chi^2_{(1)} = 4.46, p < .04$). Findings indicated that parents in BSFT significantly decreased their alcohol score from baseline to the 12 month assessment at a rate of 0.74 (IRR = 0.74, 95% CI [0.59, 0.93]), representing a 26% reduction. Parents in TAU had no significant change in ASI score over the same time period. At the 12 month assessment, parents in TAU had an average ASI score that was 69% higher than that of BSFT (IRR = 1.69, 95% CI [1.16, 2.46]). There were no significant differences between the two treatment conditions on the composite score for drug use.

Hypothesis 2—Given the relationship between BSFT and change in alcohol use among all parents, additional analyses were conducted to examine if parent reports of family functioning mediated this effect. The mediation model in Figure 1 was estimated. Because family functioning was assessed at four time points, a latent growth model was used as a measure of change. A linear model was used to estimate change in family functioning, and the latent linear slope was used as the mediating variable. Model fit for the mediation model was good ($\chi^2_{(14)} = 23.84, p = .05$; CFI = .99; RMSEA = .039). Results showed a significant treatment effect on the change in family functioning ($\beta_1 = 0.05, p < .05$) and a significant effect of family functioning on change in parent alcohol use ($\beta_2 = -0.12, p < .05$). The asymmetric confidence interval was estimated using Prodcin (MacKinnon, Fritz, Williams, & Lockwood, 2007) and indicated a statistically significant mediation (indirect) effect ($\beta_1 \beta_2 = -0.01, 95\% \text{ CI } [-0.0002, -0.0003]$). Given that change in family functioning and the ASI

alcohol score occurred over the same time period and therefore did not have temporal precedence, we tested the model again reversing the directionality of the path from change in family functioning to the ASI alcohol score at 12 months. The resulting path was not significant, which indicated that within the context of this mediation model change in family functioning significantly predicts parental alcohol use, but parental alcohol use does not predict change in family functioning.

Hypothesis 3—Wilcoxon analysis demonstrated significantly different baseline adolescent substance use depending on the Group of the parent ($\chi^2_{(2)} = 7.58, p = .02$). Children of parents who reported drug use at baseline had three times as many median days of reported substance use at baseline (median = 6) compared with children of parents who did not use (median = 2) or only used alcohol (median = 2).

Mixed model longitudinal analyses controlling for baseline adolescent substance use were conducted to determine any significant differences in the trajectories of the adolescent substance use as they related to treatment group and parent group. A likelihood ratio test confirmed the joint significance of interactions of linear and quadratic terms with treatment condition by parent group ($\chi^2_{(4)} = 9.9, p = .04$). This indicated that the trajectories of adolescent substance use differed by treatment condition and parent group. Follow-up analyses revealed significant treatment difference in the linear parameter for adolescents whose parents were in Group 3. That is, TAU adolescents whose parents were using drugs significantly increased their substance use over time relative to BSFT ($\beta = 5.01, p = .01$). Figure 2 provides a graphical representation of the difference in these trajectories. No significant differences between treatment conditions were observed in the substance use trajectories for adolescents whose parents were in Groups 1 or 2.

Additional exploratory analyses were conducted to understand the differences in the trajectories between conditions for adolescents of parents who used drugs. First, we examined if changes in family functioning could explain the changes observed between conditions. Second, to better understand for whom BSFT was having an effect we examined patient characteristics such as severity of drug use and presence of other mental disorders in adolescents of parents in group 3. Trajectories of family functioning in parents that used drugs are reflected in Figure 3 below.

There were no statistical significant differences between BSFT and TAU trajectories of family functioning, $p = 0.69$. The mean change in family functioning was 0.15 in TAU and 0.30 in BSFT, effect size 0.25; the mean at the last assessment was -0.03 for TAU and 0.09 for BSFT, and effect size 0.16. BSFT adolescents whose parents used drugs at baseline also scored higher on the agoraphobia scale when compared to the TAU adolescents whose parents used drugs ($p\text{-value} = 0.04$), on the obsessive compulsive disorder scale ($p\text{-value} = 0.04$); on total drug days ($p\text{-value} = 0.02$); on the marijuana scale ($p\text{-value} = 0.05$); and on number of days using Tranquilizers ($p\text{-value} = 0.03$).

Hypothesis 4—The correlation between change in parental substance use and slope of the adolescent substance use trajectory at the last follow-up was not significantly different from zero ($\rho = .22, p < .09$). This correlation was neither significant in the subgroup of families in

which parents did not use substances at baseline ($p = .06$, $p < .57$) nor in the subgroup of families in which parents did use substances at baseline ($p = .39$, $p < .15$).

4. Discussion

Parent Substance Use

The results presented in this paper extend prior research on family therapy for adolescent substance users by demonstrating the positive impact of interventions on parent alcohol use. The impact of BSFT on improvements in family functioning has been consistently observed in multiple studies (Santisteban et al., 2003; Szapocznik et al., 1989), but this is the first study that has shown the positive effects of treatment on substance use outcomes for other family members. Thus, although the focus of treatment was on adolescent substance use and related problem behaviors, BSFT appears to have effects that may extend to other family members, in this case parent alcohol use. The significant effect of BSFT in reducing parent alcohol use was mediated by family functioning. Specifically, this study highlights the mediating effect that improvement of family functioning has in the reduction of alcohol-using parents, and therefore supports the theoretical mechanism of action of BSFT. Parents' alcohol reductions may have resulted from learning new skills and adaptive behaviors or because there was less stress related to parent-adolescent conflict.

Adolescents with Drug Using Parents

Consistent with the research literature, this study demonstrated a strong baseline association between parent and adolescent substance use, with children of drug using parents exhibiting at least three times the number of days of substance use compared with children of non-drug using parents. BSFT was more effective than TAU in reducing substance use in adolescents whose parents used drugs at baseline. Adolescents of parent drug users represent a distinct sub-group that are particularly challenging for family therapists that must address more severe problem levels among multiple family members. It is noteworthy that the BSFT adolescents in this subgroup presented significantly more clinical problems than those in TAU. It is possible that the effect of BSFT in this subgroup is explained by improvement in family functioning. As reflected by the family functioning trajectories, it is possible that the effect of BSFT in this subgroup of adolescents was achieved by helping the using parent to be more effective in communication, parenting strategies and in resolving conflict. TAU consisted almost exclusively of individual and group therapy. Although these may serve to strengthen individual factors related to youth substance use, they do not directly address contextual factors, such as family functioning.

Limitations and Clinical Implications

Certain limitations of this study need to be acknowledged. First, the study only assessed parents at baseline and at 12 months post-randomization, only allowing a pre-post examination. This fact also imposed a limitation on the analyses of the associations between reductions in parent substance use and its potential effects on reductions in adolescent substance use (cross lag associations). Second, an important limitation is that 31.8% of parents were lost to follow up. Third, TAU consisted of an array of services, including non-manualized family therapy, but recommendations of services varied across sites. Whereas

the BSFT effectiveness study tracked the services that adolescents received as part of TAU, it did not track services received by parents. Also, it is worth noting that the effect sizes for family functioning for the subgroup of parents that used drugs reported in this paper are small and could be due to the heterogeneity of the participating families and the differences in the availability of services across sites.

The results presented in this paper have important clinical implications, providing evidence that BSFT could improve the alcohol use of parents. BSFT was found particularly beneficial for adolescents of parents who were drug using at baseline, therefore allowing for the targeting of adolescents who can best benefit from this intervention. BSFT was developed for adolescent drug abuse. However, in light of these findings, future research could examine the cost benefits of delivering BSFT to substance abusing families, as it is suggested that more than one member might obtain improvement in alcohol, drug and other health outcomes.

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Highlights

- Brief Strategic Family Therapy (BSFT) was more effective than Treatment as Usual (TAU) in reducing alcohol use in parents.
- The reduction on parent alcohol use was mediated by improvements in family functioning.
- Adolescents whose parents used drugs at baseline were more likely to use more substances compared to adolescents of parents who did not use substances and responded better to BSFT than to TAU.

Figure 1.
Mediation

Figure 2.
Trajectory of substance use for adolescents whose parents reported baseline drug use.

Figure 3.
Trajectories of family functioning in parents that use drugs

Table 1

Parent demographics

	Entire Sample N = 480	Group 1 (non-users) N = 216	Group 2 (alcohol users) N = 198	Group 3 (drug/alcohol users) N = 66
Gender				
Male	72 (15%)	26 (12%)	37 (19%)	9 (14%)
Female	408 (85%)	190 (88%)	161 (81%)	57 (86%)
Family Income				
< \$10,000	88 (18%)	44 (20%)	29 (15%)	15 (23%)
\$10,000 - \$19,999	121 (25%)	62 (29%)	41 (21%)	18 (27%)
\$20,000 - \$29,999	82 (17%)	39 (18%)	29 (15%)	14 (21%)
\$30,000 - \$39,999	50 (10%)	25 (12%)	19 (10%)	6 (9%)
\$40,000 - \$49,999	34 (7%)	17 (8%)	15 (8%)	2 (3%)
>\$50,000	99 (21%)	26 (12%)	62 (31%)	11 (17%)
Mean Age	42.91 (8.23)	43.52 (9.08)	42.41 (7.30)	42.42 (7.91)

Table 2

Adolescent demographics

	Entire Sample N = 480	Group 1 (parents non-users) N = 216	Group 2 (parents alcohol users) N = 198	Group 3 (parents drug/alcohol users) N = 66
Gender				
Male	377 (79%)	170 (79%)	157 (9 %)	50 (76%)
Female	103 (21%)	46 (21%)	41 (21%)	16 (24%)
Currently enrolled in school	398 (83%)	175 (81%)	170 (86%)	53 (80%)
Mean age	15.47	15.44	15.60 (1.31)	15.18 (1.20)
Drug abuse/dependence	350 (73%)	158 (73%)	141 (71%)	51 (77%)
Family composition				
1 biological parent	224 (47%)	96 (44%)	97 (49%)	31 (47%)
2 biological parents	120 (25%)	57 (26%)	52 (26%)	11 (17%)
Race/ethnicity				
Hispanic	213 (44%)	92 (43%)	94 (47%)	27 (41%)
White	148 (31%)	62 (29%)	59 (30%)	27 (41%)
African -American	110 (23%)	60 (28%)	41 (21%)	9 (14%)
Other	9 (2%)	2 (1%)	4 (2%)	3 (5%)