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# Preventing and Reducing Alcohol and Other Drug Use among High-Risk Youths by Increasing Family Resilience

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*This study examines the effects of a community-based program designed to delay onset and reduce the frequency of alcohol and other drug (AOD) use among high-risk youths, ages 12 to 14, through strengthening family resilience. It is part of a larger five-year demonstration project funded by the Center for Substance Abuse Prevention (CSAP). The program was implemented in multiple church communities in rural, suburban, and inner-city settings. Program components of this study included parent or guardian and youth training, early intervention services, and follow-up case management services. The results show that the program produced positive direct effects on family resilience. The evaluation also found positive moderating effects on delayed onset of alcohol and other drug use and frequency of alcohol and other drug use among youths in the form of conditional relationships with changes in those family resilience factors that were targeted by the program.*

**Key words:** alcohol use; drug use; evaluation; families; resilience

In recent years program designers have increased attention on comprehensive prevention strategies that target family factors in reducing the onset and frequency of adolescent substance use (Barnes, 1990; Bry, McGreene, Schutte, & Fishman, 1991). Interest has also focused on resilience factors as mediators or moderators of exposure to risk for youths' alcohol and drug (AOD) use and other problem behaviors (Benard, 1991; Hawkins, Catalano, & Miller, 1992; Werner, 1990). In addition, there has been a call to develop and test theories that

link the underpinnings of a social program with assessment (Bickman, 1987; Chen, 1990; Johnson, in press). Each of these is relevant to this study on prevention programming and the resilience factors associated with youths' AOD use in the family domain (Barnes & Welte, 1986; Bry et al., 1991).

This article presents findings about family resilience and delayed onset and reduction of alcohol and other drug use among high-risk youths, ages 12 to 14, participating in a one-year study with a true experimental design to



test a comprehensive prevention program. *High-risk youths* are those who have individual and family characteristics that correlate with AOD use and abuse (for example, poor grades and financial stress in the family). The resilience factors of interest are knowledge and beliefs about AOD use (Barnes & Welte, 1986; Kandel, Simcha-Pagan, & Davies, 1986), family management (Dishion & Andrews, 1995), communication (Peterson & Leigh, 1990; Rosenthal, Nelson, & Drake, 1986), bonding (Anderson & Henry, 1984; Volk, Edwards, Lewis, & Sprenkle, 1989); parent modeling of alcohol nonuse (Barnes, 1990; Brook, Whiteman, Gordon, & Brook, 1988); and family involvement in seeking help in the community (Werner & Smith, 1982). Major program components under study are family (parent/guardian) training, youth training, early intervention services, and follow-up case management services. The program was implemented in multiple church communities in rural, suburban, and inner-city settings.

This study is part of a larger, five-year demonstration project, Creating Lasting Connections (CLC), funded by the Center for Substance Abuse Prevention (CSAP), that examined the effect of resilience factors in three domains: church community, family, and individuals (youths). The CLC program was designed and implemented by Ted N. Strader and the professional staff of the Council on Prevention and Education: Substances, Inc., Louisville, Kentucky. Descriptions of the demonstration and complete study are contained in other publications (Johnson, Berbaum, Bryant, & Bucholtz, 1995; Johnson, Strader, Berbaum, Bryant, Bucholtz, Collins, & Noe, 1996).

### **Program Theory: Family Resilience**

When a person thinks of theory, what comes to mind is a set of interrelated propositions or hypotheses pertaining to an explanation and prediction of a phenomenon. According to Chen (1990) and others, this definition relates primarily to "descriptive theory," which strives to analyze events as they actually are without suggesting how they ought to be. Another type of theory that may be relevant to planning and evaluating social interventions is "prescriptive theory." It posits what ought to be done or how

to do something better. Chen (1990) argued that program theory needs to be clearly specified and incorporate prescriptive, as well as descriptive, theory.

In practice, however, there has been little attention given to this more inclusive view of program theory. In an examination of 119 demonstration studies, Lipsey, Crosse, Dunkle, Pollard, and Stobart (1985) found that only 9 percent integrated an a priori theory that included program activities and causal linkages. The study discussed in this article addresses that void by specifying and testing a set of expectations about a prevention program and its anticipated effects.

Foremost is the expectation that the program will directly increase parents' knowledge of AOD abuse, family management skills, communication skills, and family role modeling of alcohol use. The program also is expected to directly increase bonding in the family, involvement of parents in community activities with their children, and family use of community services when individual or family problems arise, especially those centering on alcohol and other drug use.

Additional expectations focus on moderating effects of the program. Baron and Kenny (1986) defined a *moderating effect* as one produced by a third variable that partitions program effects into subgroups that establish the domains of maximal effectiveness for a given outcome variable. For example, changes in family management practices advocated by the program (third variable) positively effect youths' alcohol use (outcome variable) for the program group but not the comparison group. Moderating effects are expected to occur as the result of increases in various family-level AOD resilience factors. Therefore, the expectation is that among those families whose resilience is strengthened (for example, by increased use of family management practices advocated by the program), there will be a context or condition that will delay onset or reduce the frequency of AOD use among the youths participating in the prevention program. These expectations about program effects are expressed in the following three hypotheses:

1. The training and accompanying early intervention services will increase the

family resilience of parents in the program group, and these positive effects will be sustained through case management services during the follow-up phase, compared with a comparison group.

2. The training and accompanying early intervention services will increase family resilience of youths, and these positive effects will be sustained by case management services through the follow-up phase, compared with a comparison group.
3. The training and accompanying early intervention services will reduce alcohol and other drug use of youths in the program group only when family-level resilience increases after the training and follow-up phases.

### Prevention Program

Comprehensive alcohol and other drug prevention interventions can be divided into four basic strategies: (1) information, (2) affective education, (3) social competencies, and (4) alternatives (Jaker, 1985). The CLC program incorporates features of all four strategies (Council on Prevention and Education: Substances [COPES], 1995). It provides didactic instructional training in AOD issues and dynamics to increase knowledge and beliefs. Participants are encouraged to improve their personal growth through increasing self-awareness, self-esteem, expression of feelings, interpersonal communication, and self-disclosure. Social and refusal skills are taught to provide a strong defense against environmental risk factors. Participants get opportunities to practice skills in a safe group setting. Social supports are used by mobilizing the community to reach out to families in need. In addition, the program provides families with desirable alternative activities.

These strategies are used through training modules, early intervention services for adults (parents or guardians) and youths, and follow-up case management services for families. Parents (and guardians) receive three training modules. The first module on substance abuse knowledge and issues (AOD Issues Training)

lasts 12 to 16 hours (depending on group progress). It includes the history of substance abuse prevention programs, an examination of personal and group beliefs about AOD issues, and an in-depth look at the dynamics of chemical dependency and its effects on families. The curriculum includes adapted materials from various successful training sources, such as the Cambridge and Somerville Program for Alcoholism Rehabilitation (CASPAR, 1986), a school-based program.

In the second module parents participate for 16 to 20 hours in the "Not My Child" family enrichment training. Participants are asked to examine their family management skills to develop and implement expectations and consequences for their youths in all areas of interest and concern. The curriculum highlights principles of inclusion, acceptance, understanding, respect, and autonomy.

The third training module, received by both parents and youths, is the Straight Communications Training, which is adapted from the "Say It Straight" program developed by Dr. Paula Englander-Golden (Englander-Golden & Satir, 1983; Englander-Golden, Elconin, Miller, & Schwartzkopf, 1986). It provides opportunities for parents and youths to explore and practice various communication styles during role plays. First, parents and youths practice communication skills in their respective peer groups. Then parents and their children get together to practice their new communication skills as a family unit. Individual peer groups meet for eight to 12 hours, and the combined group meets for six to eight hours.

We recognize that a key component of fostering resilience—a caring and supportive environment—is an ongoing support system for family members. Therefore, early intervention services are provided during all phases. Families can receive up to five consultations with a case manager for counseling and referral services. In addition, all families receive bimonthly telephone contact from a case manager for one full year. Follow-up case management services, which consist of telephone consultations or personal home visits for developing treatment or referral plans (as needed), are provided for six months after the training.

## Methods

### Setting and Participants

This study was implemented in five church communities in rural, suburban, and inner-city settings within a one-hour driving radius of the COPES offices in Louisville, Kentucky. A *church community* is defined as a group with support systems based on shared activities and interests involving members, rather than geographically-bounded communities. High-risk youths and their families, those with individual characteristics or environmental factors found to correlate with AOD use and abuse, were the study participants. Church community 1 was located in a suburb of Louisville. All study participants were representative of the predominantly white, middle-class congregation. Church community 2 consisted of members of a Catholic and a Protestant church in a neighboring county about 45 miles southwest of Louisville. The two churches joined to participate in the CLC program. Participants were all white, rural, small-town dwellers. Church community 3 centered around a Catholic church in a small city about 40 miles southeast of Louisville. Study participants were all white, middle-class people who lived in proximity to the church. Church community 4 involved one Catholic congregation in a suburban area south of downtown Louisville. Study participants were white and middle-class, with the exception of one African American youth. Church community 5 comprised members from three churches, one Catholic and two Protestant, in proximity to each other in a predominantly African American community west of downtown Louisville. All participants were African American; about one-half lived near the church and the other half lived elsewhere.

### Design

A randomized block design with repeated measures (Dennis & Boruch, 1994) was used for determining program effects on parent and youth outcomes. Church community was a blocking variable. Families participating in the demonstration were randomly assigned to a program or a comparison group in each of the five church communities before initiation of the program.

Data were collected at three points: (1) before program initiation (wave 1), (2) after parent and youth training (six to seven months later; wave 2), and (3) after follow-up case management services (one year after program initiation; wave 3). From each family assigned to the program or comparison groups, one parent or guardian (usually the mother) and his or her child (age 12 to 14 at any time during program implementation) completed an interview and a questionnaire.

We collected data from 143 parents (84 percent mothers, 15 percent fathers, and 1 percent guardians) and 183 youths. Sixteen percent of the families were African American, 30 percent were in the low- to medium-income groups, 47 percent had five or more family members, and 22 percent of the fathers were not in the home. Forty-five percent of the youths entering the study were 12 years old, 33 percent were 13 years old, and 22 percent were 14 years old. Fifty-eight percent were female, 60 percent had changed schools at least once, 51 percent had moved at least once since kindergarten, and 23 percent indicated that they had access to marijuana. Twelve percent of the families were participating in other AOD programs.

About seven months after the training, 114 parents (87 percent mothers, 12 percent fathers, and 1 percent guardians) and 149 youths were interviewed again (wave 2). At wave 3, after the follow-up case management services, 104 parents (89 percent mothers and 11 percent fathers) and 131 youths were interviewed for a third time. Data from 97 parents (49 in the program group, 48 in the comparison group) and 120 youths (59 in the program group, 61 in the comparison group) who completed all three interviews were used in the final analysis.

A comparison of the program and comparison groups at wave 1 on key family and environmental characteristics (for example, age, gender, youth access to marijuana, parent smoking behavior, and family participation in other AOD programs) found no statistically significant differences between the two groups. Furthermore, although the wave 1 to wave 3 attrition rate for parents and youths was 32



percent and 34 percent, respectively, an extensive attrition analysis using procedures outlined in Hansen, Collins, Malotte, Johnson, and Fielding (1985) found no evidence of differential attrition (differences between groups). A panel attrition bias (differences between waves) was uncovered, but this bias was corrected in the final analysis using procedures described in Graham and Donaldson (1993).

### Data Requirements

Data for the present study were collected through a parent and youth interview, which focused on family dynamics, and a youth questionnaire, which centered on AOD use and other sensitive information about themselves and their families. The selected items were from several sources: a standardized battery of AOD items in the Personal Experience Inventory (PEI), which was developed by the Chemical Dependency Adolescent Assessment group in St. Paul, Minnesota (Winters & Henly, 1989); risk and resilience items developed by the social development group headed by Hawkins and Catalano at the University of Washington (Hawkins & Catalano, 1989); and overdose knowledge and beliefs items from Kim (1985) and COPES (1985).

We used several methods to construct reliable and valid measures within the family and youth domains. Measures that are assumed to be the effect of a common latent construct should be interrelated (Bollen, 1989); therefore, an exploratory factor analysis or item analysis was conducted at wave 1 and a confirmatory analysis or another item analysis centering on replicating wave 1 results was done at waves 2 and 3. Item clusters (for example, family management practices or youth bonding with mother) with alpha reliabilities of .60 and above for all three waves were summed within waves to form scales. When the latent construct (for example, parent community involvement with their child or frequency of drug use) was assumed to be the cause of the observed variables, an index consisting of a count of the observed variables was constructed (Bollen, 1989). Indexes were constructed based on content when the latent variables and observed variables did not need to be correlated.

### Data Analysis

The unit of analysis for this study was the youth ( $n = 120$ ). One third of the youths were from families with two or three children participating in the study. The statistical effects of intrafamily correlations on outcome measures were found to be "minimal" (Kenny & Judd, 1986).

CLC program effects on family resilience and AOD use outcomes were examined using analysis of covariance (Barcikowski & Robey, 1994). Repeated measures were included in the analysis when available, and both constant and time-varying covariates were used. The two between-subject factors were treatment condition (program group, comparison group) and church community (five communities). Church community was used as a blocking variable to control for community differences rather than as a substantive factor. The single within-subjects (that is, repeated measures) factor was wave (three waves). These factors constitute a split-plot factorial design. Because church community was a blocking variable, the degrees of freedom were pooled into the within error term. For outcomes with only wave 3 measures, the within factor was not present, thereby reducing the design to a two-factor randomized design with constant covariates.

In addition to overall direct effects, within-church community direct effects were examined by testing for mean differences between the program and comparison groups on outcomes in each church community. Because the possibility of a Type II error (that is, failure to detect statistically significant differences) is increased because of low statistical power resulting from a reduced number of participants in each church community, these results were interpreted with caution.

Moderating effects were estimated by an analysis that compares the relationship of a third variable (that is, number of family management practices) with an outcome (for example, frequency of alcohol use among youths) for the program (experimental) group and for the entire sample (program and comparison groups combined). These moderating effects, which are conditional and nonadditive, were produced by constructing unique interaction terms involving the group factor (experimental

and comparison) and various family resilience factors. Such interaction terms were entered into the analysis as additional covariates (interaction effects) along with the corresponding moderator variable (direct effect).

Statistical significance was determined by testing directional hypotheses using a one-tailed test of significance ( $\alpha = .05$ ). Both short-term (wave 2 – wave 1) and sustained (wave 3 – wave 1) effects were assessed by using the statistical program MANOVA (SPSS, 1991).

## Results and Discussion

### Direct Effects on Family Resilience

Table 1 presents results relating to hypotheses 1 and 2 that concern overall (5 communities

combined) mean differences of resilience outcomes between waves 2 and 1 (short-term effects) and waves 3 and 1 (sustained effects) within the program and comparison groups. Table 2 results are overall statistically significant mean differences between groups when outcome measures are only for wave 3. Statistically significant within-church community direct effects mentioned in the text are not presented in the tables.

Hypothesis 1 was partially confirmed. There was a short-term gain in parents' reported communication with their youths, but this finding was not confirmed by the youths' reports of parent communication with them (Table 1). These findings are consistent with previous evaluation studies that have found positive

Table 1

### Program Effects on Family Resilience Outcomes, by Wave Mean Differences for Short-Term and Sustained Effects: Results of Repeated Measures ANCOVA

| Outcome   | Short-Term Effects       |                             |          | Sustained Effects        |                             |          |
|---|--------------------------|-----------------------------|----------|--------------------------|-----------------------------|----------|
|   | Program Group Difference | Comparison Group Difference | <i>p</i> | Program Group Difference | Comparison Group Difference | <i>p</i> |
| Family resilience                                   |                          |                             |          |                          |                             |          |
| AOD knowledge and beliefs <sup>a</sup>              | 2.70                     | .10                         | .00***   | 2.02                     | -.82                        | .00***   |
| Family meeting practices                            | 3.98                     | 3.65                        | NS       | 4.28                     | .84                         | NS       |
| Family rules about ATOD                             | .35                      | .40                         | NS       | .30                      | .18                         | NS       |
| Family rules about non-AOD youth behavior           | .35                      | .75                         | NS       | .23                      | -.04                        | NS       |
| Youth involvement in setting AOD rules <sup>b</sup> | 1.07                     | -.07                        | .00***   | .90                      | .46                         | .06†     |
| Youth involvement in setting non-AOD rules          | 1.04                     | .87                         | NS       | .78                      | -.02                        | NS       |
| Family communication: parent report                 | .62                      | .37                         | .06†     | .56                      | .35                         | NS       |
| Family communication: youth report <sup>c</sup>     | .52                      | .76                         | NS       | 1.04                     | 0                           | NS       |
| Parents' frequency of alcohol use                   | -.35                     | .02                         | NS       | -.58                     | -.85                        | NS       |
| Parents' quantity of alcohol use                    | -.02                     | -.18                        | NS       | -.33                     | -.15                        | NS       |
| Parents' frequency of AOD use                       | -.64                     | -.03                        | NS       | -.57                     | -.89                        | NS       |
| Bonding with mother: parent report                  | -.26                     | .03                         | NS       | .02                      | 0                           | NS       |
| Bonding with mother: youth report <sup>def</sup>    | .53                      | 0                           | .08†     | .56                      | -.08                        | .07†     |
| Bonding with father: youth report <sup>ef</sup>     | -.05                     | 1.14                        | NS       | .38                      | 1.07                        | NS       |
| Bonding with sibling: parent report                 | -.32                     | -.52                        | NS       | -.20                     | -.14                        | NS       |

NOTES: ANCOVA = analysis of covariance; ATOD = alcohol, tobacco, and other drugs; AOD = alcohol and other drugs. The *N* size for the ANCOVA model varies from 85 to 97 for family or parent-level outcomes and from 114 to 120 for youth-level outcomes. NS = not significant.

<sup>a</sup>Covariate: number of people living in the home.

<sup>b</sup>Covariate: number of changes in school.

<sup>c</sup>Covariate: stressful life events.

<sup>d</sup>Covariate: AOD availability.

<sup>e</sup>Covariate: religiosity.

<sup>f</sup>Covariate: defensiveness.

†*p* < .10. \*\*\**p* < .001.



direct program effects on knowledge and beliefs (Goodstadt & Sheppard, 1983), and youths' communication with parents (Peterson & Leigh, 1990; Rosenthal et al., 1986). The program also directly improved parents' family management practices relating to their involvement of youths in AOD rule setting. Significant program gains in parents' involvement of youths in rule setting is important in light of the literature on such rules in the prevention of AOD abuse and other problem behaviors (Patterson, 1982). There also is evidence in the within-church community analysis that the program produced both statistically significant short-term gains and sustained gains in parents' frequency of alcohol use in an African American church community, but there is no overall direct effect.

Table 2 shows that there are statistically significant overall sustained gains reported by both parents and youths in increased use of community services among participating families with personal or family problems. Furthermore, program participants took more action based on the service contact, and the action proved to be more helpful to them than to par-

ticipants in the comparison group. These findings build on the work of Windle & Miller-Tutzauer (1991) who found that youths who identified help-seeking community resources, other than parents and friends, reported less AOD use and other problem behaviors.

The program had no direct effect on the family management practice of using family AOD rules, and had an adverse effect on the extent of use of non-AOD rules (that is, rules to set expectations for other youth behavior) (Table 1). Also, there was no apparent effect on youths' involvement in setting non-AOD rules and the use of family meeting practices as advocated by the program.

We attribute the lack of effect on the use of family rules to use already being quite high. According to program staff, the unanticipated effect regarding use of non-AOD rules may have been the result of the program's stronger emphasis on setting AOD rules. The absence of an effect on the use of the family meeting practices advocated by the program may be the result of the difficulty of getting families to meet regularly and discuss problems as a group or to formally plan family activities.

**Table 2**

**Means and Statistically Significant Group Differences on Parents' and Youths' Resilience for Program and Comparison Groups at Wave 3 Only**

|   | Program Group<br>( <i>n</i> = 59)<br><i>M</i> | Comparison Group<br>( <i>n</i> = 61)<br><i>M</i> | Group<br>Differences<br><i>p</i> |
|---|---|--|----------------------------------|
| Parents' outcome  |   |  |                                  |
| Parents' community involvement with youth <sup>a</sup>  | 2.53  | 2.90   | .28                              |
| Parents' community service utilization <sup>b</sup>     | 1.17  | .75  | .06†                             |
| Parents' action <sup>b</sup>                            | 1.08  | .67  | .05                              |
| Parents' perceived helpfulness <sup>b</sup>             | .98   | .56  | .04*                             |
| Youths' outcome   |   |  |                                  |
| Youths' community involvement with parents <sup>a</sup> | 2.37  | 3.23   | .25                              |
| Youths' service utilization <sup>c</sup>                | .75   | .51  | .001***                          |
| Youths' action <sup>d</sup>                             | .53   | .43  | .001***                          |
| Youths' perceived helpfulness                           | .44   | .26  | .001***                          |

NOTE: The values listed for each outcome under the group differences column are the significance levels associated with the *F* test that show there is a mean difference between the program and comparison groups.

<sup>a</sup>Covariate: stressful life events.

<sup>b</sup>Covariate: family income.

<sup>c</sup>Covariate: defensiveness.

<sup>d</sup>Covariate: age.

†*p* < .10. \**p* < .05. \*\*\**p* < .001.

There also was no evidence that the program had any positive direct effects on participating families' involvement in community activities (Table 2). Instead, the within-church community analysis shows that there was a reduction in several church communities. This may have resulted from the length of the training (19 to 26 weekly sessions for parents) and the program's positive effects on increasing use of community services, both of which may have reduced the amount of free time available for parents to participate in other community activities with their children.

Results also only partially confirmed hypothesis 2, which pertains to program effects on youths' bonding with family members. Youths in the program reported increased bonding with their mothers in the short-term and through the follow-up phase of the program (Table 1). The within-community analysis showed that there were statistically significant effects on increased youth bonding with father and siblings in selected church communities. Others have also found significant effects of programs that increase family bonding (Dishion, Kavanagh, & Reid, 1989; Patterson, Chamberlain, & Reid, 1982).

### **Moderating Effects on AOD Use**

Traditionally, when evaluating the direct effects of prevention programs on AOD use among youths, finding "no program effects" has been the rule, especially when program length has been one year or less. Consistent with most previous research, this study did not find any positive direct effects on a variety of standardized AOD use measures. However, the results do show moderating effects. There is strong evidence to support the moderating effects of family-level resilience on alcohol and other drug use among youths (hypothesis 3). (We found no previous evaluation studies that have examined the moderating effects of time varying third variables.)

We found that in the short term the program produced more reduction in frequency of AOD use at three and 12 months as parents increased program-advocated AOD knowledge and beliefs; youths reported increased bonding with mother, and parents reported increased bond-

ing among siblings (Table 3). Statistically significant short-term moderating effects on other drug use were found as parents increased youths' involvement in setting non-AOD family rules, increased positive family communication (youth report), and decreased their frequency of alcohol use (that is, role modeling behavior), and parents reported increased youth bonding with the father.

The onset of alcohol and other drug use was delayed among the program group youths for one year (sustained gain) as parents increased AOD knowledge and beliefs consistent with program content (Table 3). Additional sustained gains in reduction of alcohol use were realized as parents increased program-advocated AOD knowledge and beliefs, parents used more community services when a personal or family problem arose, and youths increased bonding with the father. There also were sustained program gains in the reduction of the frequency of other drug use as parents increased their children's involvement in setting non-AOD family rules, and fathers increased bonding with their children.

One unanticipated result was that as parents reported increased positive communication with their children, the prevalence of alcohol use among youths was higher in the program group, in comparison with increased positive communication and bonding in general. These results may result from the known dynamics of denial in families in which alcohol and other drug use problems exist. Parents may have over-reported positive communication with their children to compensate for feelings of inadequacy in handling alcohol and drug use problems.

Another unanticipated result concerned youths' alcohol use and parents' report of youth bonding with the mother. As parents reported increased youth bonding with the mother, prevalence of alcohol use among youths in the short term was higher in the program group than in the total sample (program and comparison groups combined). Also, increases in frequency of alcohol and other drug use occurred in the program group as parents reported increased youth bonding with the mother. Parents of children who reported using alcohol or other drugs may have tended to overreport

Table 3

**Statistically Significant Program Moderating Effects on Youths' AOD Use as Family Resilience Increased after the Training (Short-Term) and Follow-up (Sustained) Phases of the Program**

| Youths' Outcome  | Short-Term Moderating Effect |        | Sustained Moderating Effect |        |
|--|------------------------------|--------|-----------------------------|--------|
|  | $\beta$                      | $p$    | $\beta$                     | $p$    |
| Onset of alcohol use <sup>ad</sup>                         |                              |        |                             |        |
| AOD knowledge and beliefs                                  | -.24                         | .13    | -.36                        | .04*   |
| Family communication: parent report                        | .15                          | .37    | .30                         | .05*   |
| Bonding with mother: parent report                         | .26                          | .09†   | -.08                        | .59    |
| Onset of AOD use <sup>ad</sup>                             |                              |        |                             |        |
| AOD knowledge and beliefs                                  | -.24                         | .14    | -.38                        | .03*   |
| Bonding with mother: parent report                         | .32                          | .04*   | -.11                        | .42    |
| Frequency of alcohol use over three months <sup>abcd</sup> |                              |        |                             |        |
| AOD knowledge and beliefs                                  | -.20                         | .18    | -.30                        | .08†   |
| Family service utilization: parent report                  | -                            | -      | -.24                        | .05*   |
| Parents' action  | -                            | -      | -.27                        | .04*   |
| Parents' perceived helpfulness                             | -                            | -      | -.31                        | .03*   |
| Bonding with mother: parent report                         | .42                          | .00*** | .40                         | .00*** |
| Bonding with father: parent report                         | -.03                         | .82    | -.28                        | .02*   |
| Bonding with siblings                                      | -.24                         | .07†   | .07                         | .58    |
| Frequency of alcohol use over 12 months <sup>acd</sup>     |                              |        |                             |        |
| AOD knowledge and beliefs                                  | -.26                         | .08†   | -.19                        | .25    |
| Bonding with mother: parent report                         | .38                          | .00*** | .30                         | .02*   |
| Bonding with mother: youth report                          | -.34                         | .02*   | .00                         | .99    |
| Bonding with father: parent report                         | .00                          | 1.00   | -.24                        | .05*   |
| Bonding with siblings                                      | -.25                         | .06†   | .17                         | .20    |
| Frequency of drug use over 12 months <sup>abc</sup>        |                              |        |                             |        |
| Youth involvement in setting other rules                   | -.24                         | .07†   | -.26                        | .06†   |
| Family communication: youth report                         | -.26                         | .04*   | -.00                        | .10†   |
| Parents' frequency of alcohol use                          | .28                          | .02*   | .13                         | .38    |
| Bonding with mother: parent report                         | .26                          | .06†   | .46                         | .00*** |
| Bonding with father: parent report                         | -.29                         | .03*   | -.26                        | .03*   |

NOTES: AOD = alcohol and other drugs; - = missing value. The  $N$  for the ANCOVA model varies from 85 to 97 for family or parent-level outcomes and from 114 to 120 for youth-level outcomes.

\*Wave 3 only.

<sup>a</sup>Covariate: AOD availability.

<sup>b</sup>Covariate: number of changes in school.

<sup>c</sup>Covariate: religiosity.

<sup>d</sup>Covariate: defensiveness.

† $p < .10$ . \* $p < .05$ . \*\*\* $p < .001$ .

bonding with their children because of denial. This result is consistent with the unanticipated result reported earlier regarding the moderating effects of parents' reported positive communication with their children.

### Implications for Social Work

The CLC program, an ecumenical church-based prevention program, found positive effects on family resilience outcome measures and alcohol

use among youths ages 12 to 14. Gains in family resilience were achieved through parent and youth training, early intervention, and case management services throughout a one-year period. Statistically significant overall program effects that were found to be consistent with the program message included increased parent knowledge and beliefs about AOD issues, youths' involvement in setting AOD rules, and family use of community services. In addition,



there were positive direct effects on family modeling of alcohol use in the African American church community. The program also increased bonding with mother, father, and siblings.

Most important, the program produced positive moderating effects on alcohol and other drug use among youths as a result of conditional relationships with changes in family resilience factors. The family-level factors that served as moderating variables included increased program-advocated AOD knowledge and belief, youths' involvement in setting non-AOD rules, family communication, and use of community services when problems arose. Other factors included decreased parents' frequency of alcohol use, parent-reported bonding with siblings, and increased youths' reported bonding with the mother.

We offer the following implications from the CLC study as important to social work practice and research:

- Churches are social systems from which to launch prevention efforts. We were successful in implementing the CLC program under experimental conditions in five church communities.
- An integrative parent-youth training model consisting of information, affective education, and social skill development can strengthen family resilience.
- Supplementing a parent-youth training model with alternative activities, including early intervention and follow-up case management services, can produce sustained gains in strengthening family resilience, delaying the onset of AOD use among high-risk youths and decreasing the frequency of AOD use.

Confidence in the evaluation results can be enhanced by use of a true experimental design with three or more repeated measures, multiple data collection methods, multiple indicators, and rigorous validity and reliability checks.

An examination of moderating effects of resilience factors can increase the probability of detecting statistically significant results that facilitate a more accurate understanding of the effects of alcohol and other drug prevention programming.

External validity and reliability can be increased by implementing and evaluating a program in multiple communities across rural, suburban, and inner-city settings.

## Conclusion

This study strongly suggests that prevention of alcohol and other drug use among young adolescents can be achieved by implementing a church community-based program targeting family resilience. Moreover, the study shows that community-based prevention can delay and reduce the frequency of alcohol use among youths within a one-year period. Although this is a rigorous study with a clearly defined program theory tested under experimental conditions in multiple church communities, results are strong but not definitive: Others need to replicate the CLC prevention strategy before it can be confirmed as truly exemplary. ■

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