

Preventing Behavior Problems and Health-Risking Behaviors in Girls in Foster Care

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Abstract

Transition into middle school presents complex challenges, including exposure to a larger peer group, increased expectations for time management and self-monitoring, renegotiation of rules with parents, and pubertal changes. For children in foster care, this transition is complicated by their maltreatment histories, living situation changes, and difficulty explaining their background to peers and teachers. This vulnerability is especially pronounced for *girls* in foster care, who have often experienced sexual abuse and are at risk for associating with older antisocial males. Failures in middle school can initiate processes with cascading negative effects, including delinquency, substance abuse, mental health problems, and health-risking sexual behaviors. An intervention is described to prevent these problems along with a research design aimed at testing the intervention efficacy underlying mechanisms of change.

Keywords: Gender, prevention, foster care, middle school, girls.

Introduction

Numerous studies show that youth in foster care are at high risk for an array of negative outcomes, including participation in health-risking sexual behaviors (HRSB), involvement in the juvenile justice system, substance use, failed placements/foster care “drift,” homelessness, and serious educational problems (Aarons, Brown, Hough, Garland, & Wood, 2001; Garland et al., 2001; Lewis, Pincus, Lovely, Spitzer, & Moy, 1987; Pawlby, Mills, & Quinton, 1997). Poor outcomes for youth in foster care consume a large and growing amount of national, state, and local resources (Institute for Health Policy, 1993). These risks and costs may be especially pronounced for *girls* in foster care, who have often experienced high rates of sexual abuse and numerous parental transitions, and are at risk for associating with older antisocial males and having poor relationships with female peers (Leve & Chamberlain, 2004, 2005; Pawlby et al., 1997; Underwood, 1998). Social and academic failures in middle school can initiate a set of processes with cascading negative effects for such girls, including delinquency, substance abuse, poor school performance, mental health problems, and participation in health-risking sexual behaviors. Despite such risks, adolescent girls are less likely to receive specialty mental health or school-based services than are their male counterparts (Caseau, Luckasson, & Kroth, 1994; Offord, Boyle, & Racine, 1991). In this paper, we describe the design and theoretical rationale for a study that tests the efficacy of an intervention designed to prevent behavioral and health-risking outcomes for adolescent girls in foster care who are transitioning from elementary school to middle school.

Development of Behavioral and Health-risking Problems in Girls: Selecting Intervention Targets

There is little research to guide intervention development for at-risk girls. The theoretical basis for the development of treatments for youth with antisocial behavior has been highly influenced by population-based longitudinal studies, but the vast majority of these have focused on males. Far fewer girls than boys develop problems with antisocial behavior, making girls more difficult to study in population-based samples. To help identify a target population of at-risk girls and the specific targets for intervention for such girls, we examined the risk and protective factors from a sample of girls referred from the juvenile justice system for out-of-home placement due to serious delinquency (Leve & Chamberlain, 2004). Over 80% of the girls in that study had documented child maltreatment and involvement in the child welfare system.

Analyses focused on the identification of specific childhood and family predictors that increased

the likelihood that girls would engage in early-onset delinquent behavior. Child characteristics (i.e., early pubertal onset and low IQ), family environmental factors (i.e., severe punishment, frequent parental transitions, sexual abuse, and biological parent criminality), and child court records were assessed. Results indicated that girls who ended up in the juvenile justice system were first arrested at age 12½ (on average), suggesting that a subgroup of girls engages in early-onset delinquency. Consistent with Moffitt and Caspi (2001), we found that the early-onset subgroup of girls had childhood risk factors similar to those of their male counterparts. Specifically, the number of parental transitions and the girls' biological parents' criminality significantly predicted girls' age of first arrest, with the final model accounting for 50% of the variance in age of first arrest. These findings guided us to focus our prevention efforts on girls in foster care (because of their exposure to multiple parental transitions and their likely exposure to biological parent criminality) and to select girls who were younger than age 12 (to prevent first arrests). Specifically, we focused on the transition to middle school as a key period of risk.

Selection of the intervention targets. In Leve and Chamberlain (2004) we also found that girls' who were arrested at a younger age were more likely to engage in subsequent HRSB, suggesting that numerous placement changes and early first arrest may jointly increase the likelihood of cascading risky behaviors and increase the likelihood of poor long-term adjustment. The percentages for engagement in HRSB by juvenile justice girls were strikingly high, especially given that many participants were living in locked settings (e.g., treatment hospitals, detention, training schools) for some of the time before enrollment into the study, thus limiting their opportunity to engage in any sexual relations. A composite HRSB score was formed by aggregating items 2–6 shown in Table 1. This construct score showed that engagement in HRSB at baseline related to self-reported sexually transmitted disease one year later ($r = .38, p < .01$) and poor physical health ($r = -.26, p < .05$). Many juvenile justice girls had very inaccurate beliefs about methods for preventing STDs; fewer than half correctly identified condoms without spermicide as protective against STDs. Taken together, these findings suggest the importance of preventing engagement in HRSB as one component of intervention development with foster girls.

Table 1. Percentage of Juvenile Justice Girls Who Engaged in Health-risking Sexual Behaviors at Baseline When Asked About the Prior 12 Months ($n = 90$).

	%
1. Had sexual intercourse at least once in last 12 months	89
2. Had sexual intercourse with someone known less than 24 hours	43
3. Had sexual intercourse with someone who injects drugs	33
4. "Never" or "Rarely" used safe-sex practices when having intercourse	41
5. Had sexual intercourse with 3 or more partners in a 12-month period	65
6. "Never/almost never" discussed safe-sex practices with new sexual partners	25

There was also a high level of substance use among juvenile justice girls, and in particular, girls who are first arrested at a younger age show heightened levels of substance use. Almost all girls reported using tobacco daily, and more than one third reported using marijuana, alcohol, and hard drugs daily to weekly. Further, use of each of these substances correlated significantly with HRSB, indicating high comorbidity between delinquency, substance use, and HRSB. Overall, these findings suggest that effective preventive interventions with at-risk girls may benefit from including a focus on preventing the onset of substance use.

A third related prevention target is girls' peer relations. Association with delinquent peers is a well-established risk factor for male delinquency, and there is evidence to suggest that having non-delinquent female friends may protect against some of the negative behavioral outcomes often seen in

foster care girls. To examine these, we looked at the relationship between engagement in HRSB and peer relations and found a trend toward a negative relationship between girls' HRSB engagement at baseline and positive peer relationships at baseline ($r = -.36, p = .06$) and 12 months later ($r = -.30, p < .05$). Furthermore, associating with delinquent friends was significantly related to later failure to use protective methods when engaging in sexual relations with a new partner ($r = -.46$) (Leve & Chamberlain, 2005). Other researchers have found similar relationships between the peer network and HRSB. For example, Underwood (1998) found that the number of friends and frequency of peer interactions positively predicted the avoidance of pregnancy.

Friendships with prosocial peers, especially female peers, are undermined by negative interpersonal processes such as relational aggression, which has been shown in several studies to be more prevalent in girls than in boys. Relational aggression has been defined as a non-physical form of aggression that includes disdainful facial expressions, ignoring, exclusion, gossiping, collusion, or circuitous aggression (i.e., through another person; Crick & Grotpeter, 1995; Galen & Underwood, 1997; Lagerspetz, Björkqvist, & Peltonen, 1988). Research shows that such behaviors (while more subtle than physical aggression) are associated with serious negative outcomes such as peer rejection and social maladjustment. Crick and Grotpeter (1995) found that relationally aggressive children experienced social problems such as being more disliked by other children and experienced more peer rejection, depression, loneliness, social isolation, and feelings of unhappiness compared to non-relationally aggressive children. Research highlighting the negative social and emotional effects of socially/relationally aggressive behavior, coupled with evidence suggesting that girls show the highest prevalence of these behaviors and the most pronounced negative outcomes, points to the need for developing and targeting this process in preventive interventions for at-risk girls.

In sum, our prior work with adolescent girls referred from juvenile justice suggested that they are engaging in substantial levels and multiple forms of problem behaviors, and therefore, a preventive intervention should target multiple areas and examine effects on the array of relevant outcomes.

Theoretical Model Guiding the Preventive Intervention

We developed a theoretical model to guide the intervention that is intended to address both risk and protective structures in multiple domains. The model specifies a test of the efficacy of the intervention and a test of the mechanisms of change so we can examine two interlocking sets of questions, as recommended by Snyder et al., (2006): Does the intervention work? and How does the intervention work? This approach has characterized our previous studies with boys and girls in the juvenile justice system referred because of serious delinquency (Chamberlain & Reid, 1998; Leve, Chamberlain, & Reid, 2005).

The conceptualization of how early adversity relates to proximal and longer-term outcomes and how the proposed intervention will affect proximal and longer-term outcomes for girls is shown in Figure 1. As can be seen there, early adverse experiences and events are hypothesized to relate directly to proximal outcomes (e.g., placement stability in foster care, behavior problems, school achievement, social support, affiliation with prosocial female peers, and relational aggression), which are hypothesized to relate to more severe longer-term outcomes (e.g., delinquency, association with deviant peers, school failure and truancy, HRSB, initiation of substance use, and poor mental and physical health). The preventive intervention targets foster/kin parent training, girls' skill building, and ongoing training/support for both foster/kin parents and girls. The intervention is hypothesized to directly impact the proximal outcomes. In addition, mediated effects are hypothesized such that effective parenting and girls' social competence will drive changes in the relationship between group assignment and proximal outcomes. Note that we do not expect a direct relationship between early adversity and the intervention outcomes; rather, we expect that the intervention will result in a mean-level increase in positive outcomes for each girl, regardless of her level of adversity.

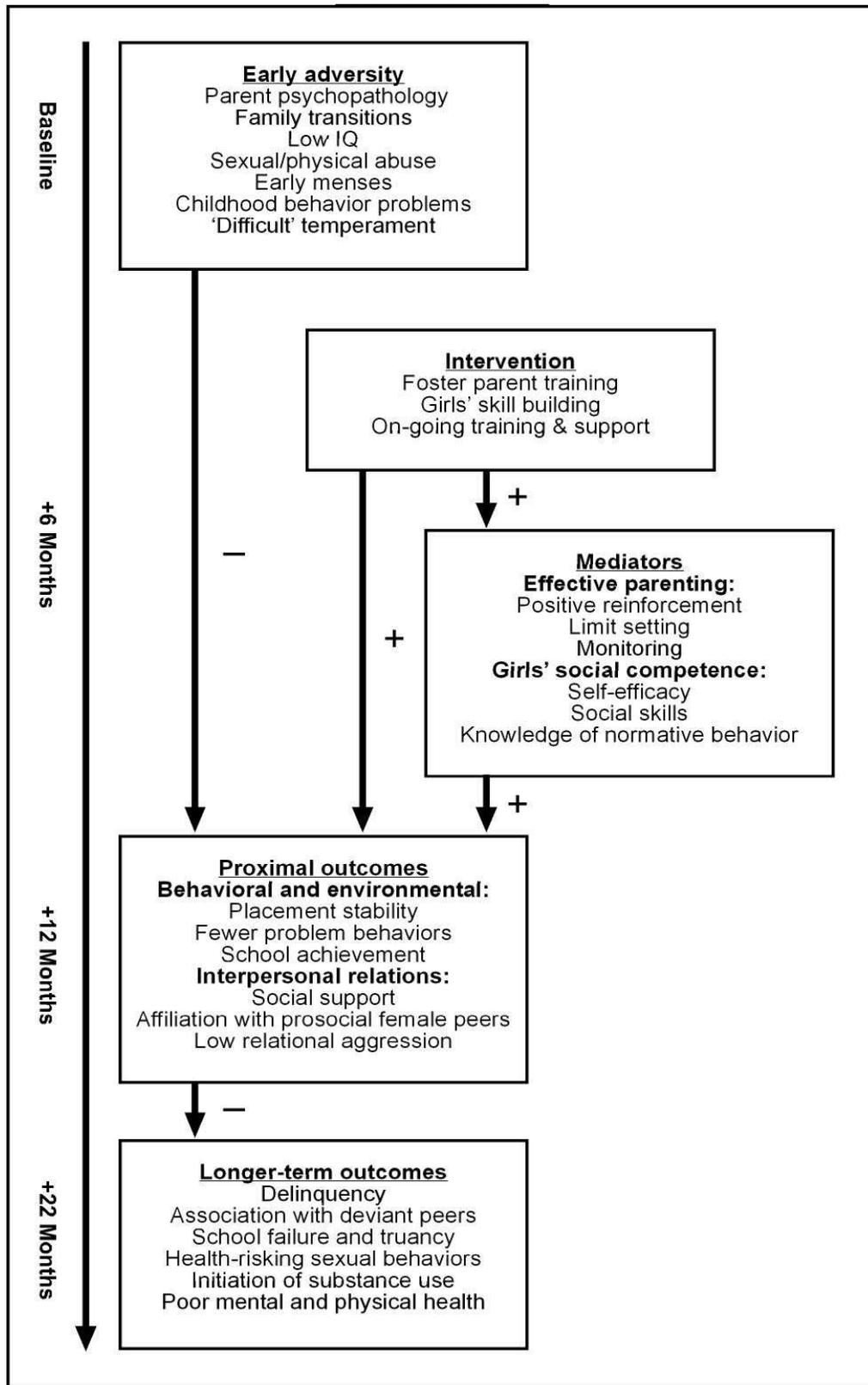


Figure 1. Theoretical Model

Evidence Base for Components of the Intervention

Parenting skills. Numerous preventative interventions have been shown to reduce or prevent youth conduct problems and problems with substance use, poor school behavior and performance, and deviant peer relations in pre-adolescent and adolescent youth. For example, studies show that the developmental pathways to a child's behavioral and health problems are strongly associated with ineffective parenting practices (Gelfand & Teti, 1990; Laub & Sampson, 1988; Loeber & Dishion, 1983), so it is logical that interventions focused on teaching and supporting parents to use more effective parenting methods have emerged as a mainstay of empirically grounded prevention efforts (e.g., Eddy, Reid, & Fetrow, 2000). These interventions have targeted parenting practices such as low parental monitoring and supervision, the use of harsh or overly lax discipline methods, and low parental involvement and/or the lack of reinforcement and mentoring. These parenting practices have a well-documented relationship to the development of youth antisocial behavior and drug use during the pre-adolescent and adolescent years (Chamberlain, 2003; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998; Patterson, Reid, & Dishion, 1992) and have been targeted as a key component of the Multidimensional Treatment Foster Care (MTFC) model that was developed as an alternative to residential and group care for adolescents with severe delinquency (Chamberlain & Reid, 1998; Leve & Chamberlain 2005). The efficacy of MTFC has been tested with children and adolescents with severe mental health problems leaving the state hospital (Chamberlain & Reid, 1991). It has also been adapted for use with preschoolers at risk for placement disruption in the foster care system (Fisher, Burraston, & Pears, 2005) and as a preventive intervention in regular "state" supported foster care settings (Chamberlain, 2000; Chamberlain, Moreland, & Reid 1992).

Child skill building. Many of the research-based programs that show positive outcomes in terms of preventing conduct problems and substance also have included a child training component (Botvin, 2000; Botvin, Griffin, Diaz, & Ifill-Williams, 2001; Hansen, 1994) often focusing on using cognitive-behavioral approaches to increase positive friendships and to increase the accuracy of beliefs about peer norms for sex, drug use, and violence. The targets are augmented by the use of motivational principles to encourage consideration of future goals and how antisocial behavior and drug use may interfere with these goals. In randomized evaluations, Harrington and colleagues found more prosocial bonding, less sexual activity, less substance use, and a trend for less aggression for youth exposed to these ideas (Harrington, Giles, Hoyle, Feeney, & Yungbluth, 2001; Harrington, Hoyle, Giles, & Hansen, 2000).

One-on-one peer mentoring (in which an older peer or young adult guides or "coaches" the youth toward prosocial endeavors through direct instruction, modeling appropriate behavior, and serving as a confidant and older advisor) is another common component of preventive interventions aimed at increasing child competency building. There is some evidence that children who have experienced the personal interest and nurturing influence of a mentor exhibit better outcomes than children without mentors (Maniglia, 1996; Mech, Pryde, & Rycraft, 1995; Philip & Hendry, 1996). These mentoring effects have been found in numerous populations, including youth in foster care (Mech et al., 1995). We use recent female college graduates (who have been recruited and trained to be "skills trainers/coaches") in weekly one-on-one sessions with study girls to increase the girls' positive relations with prosocial female peers.

Study Participants

One hundred girls and their foster/kin parents are being recruited in the Spring of their final year of elementary school (usually fifth grade). All girls living in state-supported foster homes in Lane or Multnomah County, Oregon, who are finishing elementary school are eligible for participation. Participants are randomly and equally assigned to the intervention or to the foster care “as usual” (FCSU) condition following foster parent consent and youth assent. State caseworker consent is also obtained. Kin and non-relative foster placements are included because the rate of kin placements has increased in recent years and is expected to continue to grow throughout the country. To date, 91 foster girls and their families have been recruited and have begun participation (49 in the treatment condition and 42 in the control condition).

Overview of the Intervention

The intervention includes six group sessions for the foster/kin parents before girls’ enter the sixth grade, accompanied by a parallel set of six group sessions for the girls. Following those initial sessions, which are intended to inoculate girls and foster parents to prevent early adjustment problems during the first days of transition into middle school, ongoing support and trainings are provided for both foster parents and girls, including weekly group meetings for foster/kin parents and individual weekly skill training sessions with the girls and their coaches throughout the sixth-grade year.

Foster parents. An overview of the session content for foster parents is in Table 2, and topics for the ongoing support and training sessions are in Table 3. In addition, throughout the intervention foster parents participate in a 10-minute telephone interview (i.e., the Parent Daily Report Checklist [PDR]; Chamberlain & Reid, 1987) about the occurrence/nonoccurrence of behavioral and/or emotional problems during the past 24 hours and the type of mentoring, discipline, and supervision they have used during the past day. PDR has been shown to predict the probability of placement disruption in foster care (Chamberlain et al., 2006) and has been used in numerous studies to measure intervention outcomes (Kazdin & Wassell, 2000).

Table 2, Next Page

Table 2. *Topics for the Initial Foster/Kin Parent Group Sessions*

Session	Topic	Description
1	Group orientation and overview	Introduce group members and leaders Overview of issues facing pre-adolescent girls and discussion of group rules Home practice: List 5 best things about foster girl and 5 aspects of their parenting they feel best about
2	Encouraging cooperation/ adult requests Tracking relational aggression	Review home practice assignment What are reasonable expectations? Definition of cooperation. Spotting relational aggression and rationale for intervening even though it is a “little” thing How adult requests can be framed and common pitfalls Home practice: Deliver and watch the reaction to 10 requests
3	Basics of behavioral contracting/tracking	Review of home practice assignment Discuss systematic tracking and breaking tasks down Using steps toward the target behavior to set up a point and level system Home practice: Track a target behavior and devise a point and level system
4	Fine tuning and individualizing the point and level system – keeping it relevant and responsive to girls’ changing needs	Review of home practice assignment Group discussion and review of contracts Discuss the use of behavioral incentives Home practice: Continue to track, to talk to foster children about incentives, and to revise contracts
5	Presenting behavioral change plans to girls	Review of home practice assignment Discuss how to frame the point and level system so that it will be received positively Home practice: Present the point and level system to the girl and implement
6	Limit setting	Review of home practice assignment Discuss the balance between encouragement and limit setting Present the principles of effective discipline Home practice: Continue to refine and implement the point and level system

Table 3, Next Page

Table 3. *Topics for Ongoing Group Sessions*

Focus area	Topics covered
Setting limits without escalating problems	Presentation of an effective procedure for time out and video Procedure for privilege removal
School involvement—working with teachers	Importance of clear home-school communication How to initiate and maintain effective home-school communication
Relational aggression and emotional dysregulation	Review of problems that are occurring on splitting. Discussion of why deciding to change things when girls are upset is a bad idea. Emotional coercion and how not to reinforce it. Adding these behaviors to the behavioral plan
Becoming involved with your girl's peers	Rationale for monitoring peer associations Methods for monitoring peer associations
Encouraging prosocial female peer relationships	Specific steps that encourage positive peer involvement with other girls How to monitor peer relationships as they develop and change Creating opportunity for positive peer associations with a female friend
Dealing with covert problem behaviors	Discussion about dealing with behaviors that are not observed How to address these less obvious behaviors (e.g., stealing)
Addressing development and change in girls	Discussion of what the research shows on the difficulty of being a teenaged girl Dealing with girls' negative self images and the special identity problems of being a foster child. Modeling "taking care of oneself as a young woman" and stress reduction methods you can share. Revising behavioral plan to include developmental issues and gender
Health-risking behaviors	Creating a plan for talking to girls about sexual matters that involves basic education and that opens the door for girls to communicate about the concerns, pressures, and challenges they face. Basic review of risk factors and special issues facing youth with histories of trauma and abuse. Role playing initiating the conversation with other parents and reading educational information on safe sex practices and "How to Talk to Teens about Sex"
Substance use and knowing about norms, motivation to not use and what to do if suspicion of use occurs	Discussion of the importance of orienting girls to community norms (debunking perceptions that "everyone uses"), focus on goals and plans inconsistent with use, how to talk about risks and triggers, conducting urine-analysis—when and how.
Stress on your family dynamics	Why are girls harder than boys? Common relational traps. Getting other family members on board with the program. Using each other for support.

The ongoing group meetings focus on 15 areas that are interwoven each week with issues raised by the foster/kin parents and current problems flagged from the PDR data. A trained facilitator and a co-facilitator (i.e., an experienced foster/kin parent) conduct the parent group sessions, with approximately seven foster parents per group. The curriculum is designed to address prevention of participation in delinquency, HRSB, and substance use, and to present strategies for helping girls build friendships with prosocial peers and refrain from relational aggression. Between group meetings, foster/kin parents are encouraged to implement behavioral procedures (i.e., home practice assignments and use of a daily point and level system). The point and level system has been used extensively in implementations of the MTFC model (e.g., Chamberlain 1994, 2003) and has been shown to directly contribute to placement stability (Smith, 2002). The point and level system is designed to provide a structure for foster/kin parents to provide girls with a rich daily schedule of reinforcement for normative/appropriate behavior and clear limits for problem behaviors. The group facilitator uses the PDR data to connect the planned curriculum to the daily challenges the foster parents are facing. Group facilitators receive initial training in the

intervention model and ongoing weekly supervision from a clinical supervisor. Foster/kin parent meetings are videotaped and the tapes are reviewed weekly to ensure model fidelity.

Foster girls. The initial six sessions for the foster girls are held in a group format. The group is called *Summer Pride*. The sessions occur at the same time that the foster/kin parent group sessions occur (twice weekly for 3 weeks). The *Summer Pride* sessions aim to help girls prepare for middle-school entry and focus on topics such as increasing girls' skills for establishing and maintaining positive relations with female peers, decreasing vulnerability stemming from the stress of being a foster child, increasing self-confidence, and decreasing receptivity to initiations from antisocial peers.

The skills that are targeted include strengthening problem solving skills; practicing sharing/cooperating with peers; increasing the accuracy of perceptions about peer norms for abstinence from drug use, sexual activity, and violence; and practicing strategies for meeting new people, for dealing with feelings of exclusion, and for talking to friends and teachers about life in foster care. Each girl identifies a set of short- and long-term goals and is asked to make a public commitment to avoid drugs and HRSB. Recent female college graduates who are experienced coaches conduct the *Summer Pride* sessions. During the final *Summer Pride* session, girls work with their coaches to solidify the image that they wish to project as they enter the sixth grade and to examine options for projecting that image.

Once school starts, weekly individual coaching sessions occur that focus on three primary topics: helping girls establish and maintain positive peer relations, especially with female friends; increasing girls' knowledge of accurate peer norms for sexual and drug-use behaviors and increasing comfort talking about these topics; and helping girls solve problems and relieve stress in academic and social areas. Similar to a peer mentoring approach, coaches serve as role models for appropriate prosocial behavior and are confidants for issues surrounding family life and peer relations. To facilitate positive peer relations, coaches help girls identify non-deviant female peers with whom to participate in social events. Coaches engage in role-playing and problem-solving discussions with girls on how to begin friendships and on how to handle relational aggression from peers. Coaches are trained and supervised to use a behavior-based approach to help girls learn and practice new social skills.

Throughout the year, coaches emphasize the risks of abusing substances and discuss developmentally appropriate issues around dating and partner relations with girls. Prior work suggests that providing such support can facilitate discussions on sensitive topics such as sexuality and substance use (Prescott, 1998). Modeling the work of Belcher et al. (1998) and Lefkowitz, Sigman, and Kit-fong Au (2000), coaches provide information about STD transmission and risk behaviors, discuss the prevalence of STDs, and clarify any misconceptions regarding these topics. The coaching relationship is not intended to provide girls with therapy but rather with ongoing social support and training. Weekly supervision of the skills trainers/coaches helps to keep this distinction clarified.

Specific Hypotheses and Conclusions

We are hypothesizing that the preventive intervention described here will positively impact proximal outcomes (shown in Figure 1) measured at the end of the sixth grade. Specifically, girls in the intervention group are expected to have fewer behavioral problems, fewer placement disruptions, better school achievement, more social support, more affiliation with prosocial female peers, and less relational aggression than girls in the control condition who are receiving case work services as usual. Second, we hypothesize that the preventive intervention will positively impact a set of more distal outcomes to be measured at the end of the seventh grade. Specifically, the intervention group girls are expected to be more academically competent, to participate less in substance experimentation and use, to partake less in HRSB, to show less delinquency, to have fewer deviant peer associations, and to have better mental and physical health than the control group girls. Third, we hypothesize that effective parenting will serve as a

mediator of intervention effectiveness such that parenting characteristics at the 6-month assessment will account for significant amounts of variance in the proximal outcomes. Therefore, we expect that, regardless of group assignment, the girls who receive more positive reinforcement, closer supervision/monitoring, and more effective limit setting will have less substance use, less HRSB, less delinquency, and better academic performance at the 6-month follow-up. Fourth, we hypothesize that girls' interpersonal skills, self-efficacy, and knowledge about the norms and personal risks for HRSB and substance use will significantly mediate the relationship between group assignment and proximal outcomes.

The intervention described here is theoretically based and designed to target multiple factors through work with parent figures and individual youth. Although intervention activities take place intensively (twice per week) before the school year begins and continue to occur weekly throughout the girls' sixth-grade year, they are designed to be relatively low cost (estimated at \$1,500 per girl). Group sessions are conducted for the parents, and bachelor's level coaches are used for interventions with the girls. If serious problems with delinquency, substance use, and/or participation in HRSB can be avoided, it is likely that the intervention will be cost effective. The randomized design being used will allow for a rigorous test of the study hypotheses, which are aimed at evaluating whether this intervention can lessen the risks of serious negative outcomes for vulnerable foster girls.

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