The Journal of Primary Prevention, Vol. 27, No. 6, November 2006 (© 2006)
DOI: 10.1007/s10935-006-0060-x

Implementing an Evidence-Based Preventive Intervention in Neighborhood Family Centers: Examination of Perceived Barriers to Program Participation

Susanne S. Lee,[1] Gerald J. August,[1,2] Michael L. Bloomquist,[1] Robin Mathy,[1] and George M. Realmuto[1]

Published online: 13 October 2006

*This study examined parents' perceived barriers to participation in a multicomponent prevention program implemented by a community agency serving culturally diverse urban neighborhoods. The Early Risers Participation Interview (ER-PI), modeled after Kadzin et al.'s (1997) Barriers to Treatment Participation Scale, was administered to parents (*N = *138) of children who were screened for disruptive behavior and were randomized into a two-year intervention condition. Results showed that the perceived barriers score provided significant information in differentiating low and high participators after controlling for child, parent, and family characteristics. Early identification and resolution of parents' perceived barriers to participation may be key to implementing multifaceted preventive programs successfully in inner-city neighborhoods.*

Editor's Strategic Implications: *The authors present promising practices for client engagement and retention. The experimental, longitudinal design is notable, especially in the evaluation of a community-run prevention program.*

KEY WORDS: barriers; participation; prevention program.

Prevention research has demonstrated the positive mental health impact of multi-level conduct problems preventive interventions when delivered under the well resourced and choreographed conditions of efficacy trials. These programs include but are not limited to Early Risers (August, Hektner, Egan, Realmuto,

[1]Division of Child and Adolescent Psychiatry, University of Minnesota.
[2]Address correspondence to Gerald J. August, Ph.D., Division of Child and Adolescent Psychiatry, University of Minnesota Medical School, F256/2B West, 2450 Riverside Avenue, Minneapolis, MN 55454, USA; e-mail: augus001@umn.edu.

& Blooomquist, 2002; August, Realmuto, Hektner, & Bloomquist, 2001); Fast Track (Conduct Problems Prevention Research Group [CPPRG], 1999, 2002); Linking the Interests of Families and Teachers (LIFT; Reid, Eddy, Fetrow, & Stoolmiller, 1999); Schools and Families Educating (SAFE) Children (Gorman-Smith et al., 2002), Incredible Years (Webster-Stratton, 1996), and the Schools and Homes in Partnership (SHIP; Barrrera et al., 2002). The success of these programs can be attributed, in large part, to high rates of client participation and retention that were achieved when program developers devoted sufficient resources to overcome participation barriers. For example, the Fast Track Program achieved high rates of participation by providing transportation to program venues, using home visits to provide family support, offering incentives such as refreshments and cash payments for attending parent group sessions, building positive relationships with parents, and maintaining contact with caregivers regardless of their rate of participation. Of those who participated during the first year of the program, parents attended an average of 71% and children attended an average of 78% of the sessions offered (CPPRG, 2002).

Participation enhancement strategies similar to those applied in the Fast Track Program are not feasible in routine community practice, particularly in poor urban settings (Snell-Johns, Mendez, & Smith, 2004). As a consequence, sporadic participation rates and poor retention can occur, thereby jeopardizing a program's capacity to realize its potential public health impact. Thus, a necessary first step for program replication in community-based prevention efforts (i.e., effectiveness trials) is to understand the factors that affect client participation and retention.

Delineating the inherent differences between efficacy and effectiveness trials may shed light on factors that undermine client participation (August, Winters, et al., 2004). Efficacy trials tend to enroll rather homogeneous client samples precisely fitted to the exigencies of the program while effectiveness trials recruit a more heterogeneous client base dictated by the catchment area or service mandate of the host agency. Families in effectiveness trials may vary widely not only in cultural affiliation, socioeconomic status, and level of risk but also in motivation to participate and their acceptance of a particular intervention. This latter factor is reflected in a parent's beliefs in the value of health promotion or risk prevention, attributions about who is the focus of the intervention, and expectancies about relevance of the program (Morrissey-Kane & Prinz, 1999). Situational demands imposed on poor urban families may also be serious impediments to program participation. For example, transportation to program venues, scheduling of program activities, and cost of program services are usually not problematic in efficacy trials where their management has been planned and coordinated by researchers and where program funds are provided by research grants. However, these situational demands present serious barriers to participation in community practice. This is particularly true when clients are responsible for finding their own transportation, when program activities are scheduled at times inconvenient for clients, and when agency resources are scarce.

Significant differences also may exist in the staff who deliver prevention programs in efficacy trials compared to those in effectiveness trials. In efficacy trials, advanced graduate students, university faculty, or highly experienced professionals are employed as both recruiters and implementers. Such individuals are overtrained in the requisites of the program, persistent when confronted with resistance, skilled in building alliances with their clients, flexible in scheduling program activities, and highly invested in program outcomes. Implementers in effectiveness trials are often selected from the ranks of agency staff and their allegiance to the new program is uncertain. They are typically asked to take on large caseloads and are often requested to perform ancillary duties unrelated to the program at their agency. These differences may be reflected in disparities in the quality of relationship and engagement between implementer and family that ultimately translate to differences in client participation (see Orrell-Valente, Pinderhughes, Valente, & Laird, 1999).

Barriers to participation has been a focus in research with the Early Risers "Skills for Success" prevention program. This program was originally shown to be efficacious in a long-term, randomized controlled trial with a well-characterized sample of aggressive children (August, Realmuto, Hektner, et al., 2001). In that efficacy trial high rates of child and parent participation were achieved by applying strategies similar to those used in Fast Track (see above). In a subsequent early-stage effectiveness trial Early Risers was delivered by a community agency although program developers provided funding, administrative direction, supervision, and technical assistance to support the agency with program implementation. Although rates of program participation were less than those achieved during the efficacy trial, they nevertheless were acceptable and the program successfully produced significant benefits to the sample at large. However, program effects were strongest for children who attained higher levels of participation across program components (August, Lee, Bloomquist, Realmuto, & Hektner, 2003) and were maintained at a one-year follow-up only for those who achieved recommended participation levels (August, Lee, Bloomquist, Realmuto, & Hektner, 2004).

The present study sought to advance knowledge regarding the movement of evidence-based prevention programs from science to service by examining barriers to participation experienced by families in an implementation of the Early Risers program that was completely controlled by a community agency. In this advanced-stage effectiveness trial the agency assumed responsibility for funding program activities, supervising day-to-day program operations, and applying strategies and incentives to enhance family participation and retention. It was anticipated that without support and supervision of program developers the agency would experience significant challenges in replicating positive results, in part, because of limited resources to optimize client participation.

To collect information on participation barriers we developed an interview instrument adapted from Kazdin's Barriers-to-Treatment Participation Scale

(Kazdin, Holland, & Breton, 1991). The original scale consists of 44 items that assess barriers related to the following four themes: (a) practical obstacles that compete with treatment, (b) treatment demands and issues such as treatment being experienced as too confusing, too long, or difficult, (c) perceptions that the program is not relevant to the child or consistent with parent expectations, and (d) quality of relationship or alliance with the therapist, including affinity and perceived supportiveness. Kazdin and colleagues (Kazdin, Holland, & Crowley, 1997; Kazdin, Holland, Crowley, & Breton, 1997) found that perceived barriers predicted higher rates of terminating treatment and that barriers added significant information in predicting participation over and above more traditional child, parent, and family factors. The adapted version administered in this study relied on the same four barriers (obstacles, demands, relevance, and relations). In light of the multicomponent framework of Early Risers, we reasoned that barriers might operate differently across components based on the location in which the component was delivered (agency, home), the time of year the component was delivered (summer, regular school year), and the family member who was the primary focus of the component (child, parent). We created distinct item subsets, reflecting each of the four barriers, for each of the four program components. The items subsumed in each subset were constructed to fit the specific requirements for participation in that component.

Informed by previous research on barriers to participation in children's mental health treatment (Kazdin, Holland, Crowley, & Breton, 1997) and family-focused prevention (Spoth & Redmond, 1993, 1995, 2000) we formulated several hypotheses to guide the present research. First, we hypothesized that practical obstacles (e.g., unreliable personal transportation, competing activities) would be the strongest predictor (i.e., barrier) of participation for the two Child Skills program components (Summer Program, After-School Program). Second, we hypothesized that relations between parents and their assigned program implementer (i.e., family advocate) would be the strongest predictor of participation for the two family-focused components (Family Skills and Family Support). Last, we hypothesized that program relevance would be a significant but secondary predictor of participation for each of the intervention components.

This study also evaluated whether perceived barriers to participation would predict participation levels above and beyond more conventional child, parent, and family characteristics such as child's level of behavioral risk, family socioeconomic disadvantage, single parent status, and maternal depression. On one hand, each of these factors has been shown to predict discontinuation of clinic-based therapy in families seeking outpatient treatment for childhood conduct problems (Armbruster & Kazdin, 1994). On the other hand, Spoth and colleagues found that community-level variables, not person-level factors, mediated participation in family-based preventive interventions (Spoth, Ball, Klose, & Redmond, 1996; Spoth, Redmond, Hockaday, & Shin, 1996).

METHOD

Participants

This study included a subset of 138 children (55 girls and 83 boys) and their parent(s) who were enrolled in a randomized preventive-intervention effectiveness trial designed to prevent youth conduct problems. These children were recruited from four, 4-school clusters ($n = 16$) aligned with each of the four neighborhood centers (i.e., center-catchment areas) located in economically disadvantaged urban neighborhoods in a large Midwestern city. Eighty-three percent of the children were African American, 9% were White, and 8% were of other ethnic groups or mixed background based on parent identification of ethnicity. At study onset children were completing kindergarten (46%) or first grades (54%) with an average age of 6.3 years.

Identification, Selection, and Recruitment of Child Participants

A multi-stage identification and recruitment plan was implemented. First, research study announcements were distributed to the primary caregivers (usually parents) of all K and 1st grade students at the 16 schools. The announcement described a longitudinal study that sought to evaluate children's adjustment to school and family factors that might be related to child adjustment. Parents were informed that a limited number of children and families would be invited to participate in a study to learn about factors associated with positive school adjustment and that some families also would be invited to participate in evaluation of a school adjustment promotion program (Early Risers) offered at a neighborhood center in proximity to their residence. Families were further informed that a 'lottery' would be used to select families for the research study and school adjustment promotion program but that all families would be assisted in finding services if requested. Parents interested in the study were instructed to return a signed postcard granting permission for their child's teacher to complete a short questionnaire to identify the child's entry level of behavioral adjustment (i.e., screening measure). Approximately 90% of the kindergarten and 1st grade population was successfully screened. Exclusion criteria included the presence of a pervasive developmental disorder or serious emotional-behavioral disorder that required special education placement and the absence of one English-speaking caregiver.

The screening measure was the Teachers Observation of Classroom Adaptation - Revised (TOCA-R: Werthamer-Larsson, Kellam, & Wheeler, 1991). The TOCA-R has been used successfully to identify at-risk children in other prevention studies (e.g., CPPRG, 1999, 2002) and has adequate retest reliability and predictive validity over a short time interval (Lochman & CPPRG, 1995). For each

child an aggressive/disruptive behavior score was calculated by taking the mean of three subscale scales: Aggression, Hyperactivity, and Impulsivity. The mean composite score for the total screened population ($N = 1{,}438$) was 2.07 ($SD = 0.95$). Children in the upper 35% of their classmates within the same gender on aggressive/disruptive scores were designated as high risk (i.e., living in high crime-rate neighborhoods and showing aggressive behavior) ($n = 516$; cutoff scores, boys = 2.44, $n = 272$, girls = 2.05, $n = 244$). This threshold is similar to the 32% cutoff score that distinguished high risk (aggressive children) from normative children in a previous study with this same population (August et al., 2003). The remaining 65% of the children were designated as moderate risk ($n = 922$) (i.e., living in high crime-rate neighborhoods and showing no aggressive behavior). In response to a request from school officials to offer the program to the neediest students, the study over sampled high-risk children at a ratio of 3:2.

Following the screen, pools of high risk (HR) and moderate risk (MR) children within each center-catchment area were selected for the longitudinal study using a stratified randomization procedure (see below). In addition, subsets from each pool were further assigned at random to either the Early Risers Program or control condition.

From the pool of HR children, a total of 272 families were randomly selected and contacted, and 169 (62%) children were successfully recruited (i.e., parents consented) for the study. This included 118 program children and 51 control children. Among the MR sample, 224 families were randomly selected and contacted, and 126 (56%) were successfully recruited. This included 91 program children and 35 control children. There were no significant differences between those recruited and those not recruited on the TOCA-R screening index, gender, and grade. This was true for both the HR and MR subgroups. Among the HR sample, however, there were significantly more 1st graders recruited. Of those who were contacted but not recruited ($n = 201$), 56% stated that they were not interested, 16% had language barriers, 9% missed appointments with program staff, 9% stated their children were in other programs or competing activities, and 9% had other reasons (e.g., no time, foster care).

Examination of differences between program and control groups in demographic variables revealed that there was no significant group effect on age, gender ratio, grade ratio, race, TOCA-R disruptiveness score, high-risk ratio, IQ, female caretaker's age, SES, annual household income level, number of times moved in the past year, number of siblings living with child, and families from single parenthood.

Design of Effectiveness Trial

Within each of the four center-catchment areas, enrolled children were assigned to either the Early Risers Program or the assessment-only control

condition via a stratified randomization procedure. The sample was stratified by risk status (high/moderate), gender (boy/girl), grade (K/1st), and neighborhood center (one of four geographically-based centers). As noted above, the ratio of HR to MR approximated 3:2. Because the HR population had a gender ratio of 3 boys to 2 girls, this ratio was maintained in selecting boys and girls for each study condition. Ratios within the remaining stratification variables were maintained at 1:1 in the assignment process. In accordance with these ratios and within each stratification cell, subjects within each neighborhood center-catchment area were randomly assigned to one of the two conditions. The resultant group sizes aggregated across four centers were as follows: program group, HR $n = 118$, MR $n = 91$ (total $n = 209$); control group, HR $n = 51$, MR $n = 35$ (total $n = 86$).

Intervention Components

The Early Risers intervention framework includes multiple components that are delivered over a two- or three-year period (Bloomquist, August, Lee, Berquist, & Mathy, 2005). Child-focused components are designed to teach skills that enhance children's self-regulation, social adjustment, and academic competence and a school support program to promote the child's successful adaptation to school. Family-focused components offer parenting education and support services intended to strengthen parenting skills, reduce parent's stress, and improve parents' personal functioning in order to promote parent/child bonding and encourage parents to become more involved in their child's schooling.

Child-Focused: Summer and After-School Programs

The Early Risers Summer program was conducted Monday through Thursday, three hours a day for six weeks, over three consecutive summers. Each day consisted of one hour of social skills training, one hour of reading skills instruction/reading appreciation, and one hour of creative arts appreciation. The Early Risers After-School program was similar to the Summer program in its emphasis and scope, and was offered two days per week after school during the school year. During these two days, children received one hour of social skills training and one hour of reading appreciation and/or homework assistance. In total, children were offered 216 h (72 hours each year) of Summer program and 102 h (48 hours in Year 1 and 54 in Year 2) After-School programming over two years. Empirically supported curricula for social skills training and reading skills development were utilized in the Summer and After-School programs (see Bloomquist et al., 2005 for details).

Family-Focused: Parenting Education and Skills Training Program

For two consecutive years, during the winter and spring months, the Early Risers "Parents Excited About Kids" (PEAK) program was offered to parents/guardians of Early Risers children. PEAK sessions were led by family advocates, with the assistance of outside speakers. "Topics and Tips" related to child development and parenting were presented and discussed in the parent meetings. Parents met for ninety minutes in small groups held at the neighborhood center. Six bi-weekly sessions were held each year.

Family-Focused: Family Support Program

The Early Risers Family Support program is a tailored, case management-anchored service comprised of three key elements: (1) each family's level of need is systematically assessed, (2) goals are set to achieve family, parent, and child stability, and (3) families are linked to community resources to assist them in meeting their goals. Family advocates visited families in their homes for face-to-face visits/contacts and provided services on an as needed basis. Typically, each family advocate worked with 25 families, but usually only 5–10 families required a high level of family support services at any one time. Progress toward achieving goals was determined via a goal attainment scaling methodology. The Early Risers manual provides a menu of brief interventions and service options for the family advocates to provide to the family. Advocates were required to make a minimum of three Family Support contacts in Year 1 and six contacts in Year 2. Because this component is an idiographic prevention tool adjusted to the needs of each family, there was considerable variability in the amount of contact time for each family. For some families this requirement was not met, while other families received many more contacts than the minimal standard (August et al., 2003).

Rates of Participation

Table I presents the means and standard deviations of program attendance for the 209 intervention children/families. As shown in Table I, participation rates across components were less than optimal at Year 1, and then there was a dramatic drop in participation rates across components from Year 1 to Year 2. For instance, number of children who attended at least one session dropped from 105 (50.2%) at Year 1 to 43 (20.6%) at Year 2 for the Summer program, and from 150 (71.8%) at Year 1 to 53 (25.4%) at Year 2 for the After-School program. At the completion of the second year of intervention there were 150 parents in the intervention condition who were available for assessment. A total of 138 parents of the 150 completed the ER-PI interview. Attrition analysis comparing those who completed

Table I. Means and Standard Deviations of Program Attendance for Children and their Families who were Randomized to the Intervention Group ($N = 209$)

	Attendance for those who participated			
Program component	*n*	*M*	*SD*	Total # of sessions offered
Year 1				
Summer program	105	15.30	7.08	24
After-school program	150	27.84	14.67	48
Family skills program	36	4.31	1.58	6
Family support (# of visits)	179	10.24	9.17	–
Year 2				
Summer program	43	10.23	5.89	24
After-school program	53	28.87	18.04	54
Family skills program	17	3.82	1.91	6
Family support (# of visits)	160	10.13	9.45	–
Year 3				
Summer program	50	13.00	7.59	24

the ER-PI ($n = 138$) and those who did not ($n = 71$) showed that there was no group difference in any demographic characteristics (age, ethnicity, gender ratio, grade ratio, TOCA-R disruptiveness score, high-risk ratio, IQ, female caretaker's age, SES, annual household income level, number of times moved in the past year, number of siblings living with child, and families from single parenthood). Of those who completed the ER-PI interview, 96% were female. The average parent age was 33 ($SD = 7.74$) years. Socioeconomic status of the families fell in the low to middle-lower range based on Hollingshead's classification system (Hollingshead, 1975). Sixty-two percent of participants lived in single-parent households, and 50% of the families had incomes below $20,000 per year. Twenty-eight percent of families reported having moved at least once in the past year. The average number of siblings living with child was 2.27 ($SD = 1.52$).

Grouping High vs. Low Participators

Distributions of the participation data for the four program components showed that they were non-normally distributed with large values of skewness and kurtosis. For instance, in the second year of intervention 68% of the 138 children showed up less than 3 sessions (range = 0–54) for After-School program, and 70% showed up less than 3 sessions (range = 0–24) for the Summer program. Only 12% of the families attended one or more sessions (range = 0–6) for the Family Skills program and one fourth had less than 3 contacts (range = 0–59) for the Family Support program. Thus a decision was made to categorize our sample into high vs. low participator groups. We defined the groups using a 50% cutoff of the total number of sessions offered in the second year of intervention

for standard intervention components, such as the Summer program, After-School program, and the Family Skills program. The 50% cutoff point was based on our previous effectiveness study where we found moderate program effects on measures of school adjustment, social competence, and disruptive behavior (August et al., 2003). In that study, 50% of the children attended at least 48% or more of the sessions offered for the Summer program, and 43% or more of the sessions offered for the After-School program. Using the 50% criterion, the cutoff for the Summer program was 12 sessions (50% of the total 24 sessions offered), for the After-School program 27 sessions (50% of the total 54 sessions offered), and for the Family Skills program 3 sessions (50% of the total 6 sessions offered). For the Family Support program, the minimum required number of contacts (6 visits in Year 2) offered to the sample was used to categorize families into high vs. low participator groups.

Measures

Parent's Barriers to Program Participation

To measure parent's perceptions of barriers that influenced their program participation an instrument was developed based on Kazdin, Holland, Crowley, and Breton (1997), Early Risers Participation Interview (ER–PI) (see Appendix). The ER-PI includes four sections, corresponding to each of the four component programs that were included in the full strength Early Risers intervention (Summer program, After-School program, Family Skills program, and Family Support program). Within each section, items were aggregated into four subscales that correspond to Kazdin et al.'s (1997) four domains that reflected barriers to program attendance, participation, and completion. This included: (a) Stressors and Obstacles that compete with the program; (b) Demands and Issues that reflect dissatisfaction with the program; (c) Perceived Relevance of the program with respect to child and parent concerns; and (d) Relationship of the program staff with the child and parent(s). The number of items per subscale ranged from 4 to 7. Scores for each item were measured on a 5-point anchored Likert-type scale that ranged from 1 = Strongly Agree to 5 = Strongly Disagree.

Child, Parent, and Family Characteristics

Parents completed a *Biographical Questionnaire* during the initial assessment prior to start of intervention. The questionnaire asked general background information about the child, parent and family, including single-parent household status (yes/no), annual household income level, number of times moved in the past year, number of siblings living with the child, Hollingshead's (1975) index

of social status, and female caretaker's age. Annual household income level was rated on a 9-point scale where 1 = $0–$10,000; 9 = >$80,000. Number of times moved in the past year was rated on a 4-point scale where 0 = none, 1 = once, 2 = twice, and 3 = three times or more. Level of social economic status (SES) of each family was computed on the basis of educational and occupational levels described in the Hollingshead (1975) four-factor index of Social Status.

Parental depression was measured using the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). This self-report measure consists of 21 items that assesses severity of depressive symptoms with good psychometric properties. For each item respondents select one of three statements that differ in presence or severity of depressive symptom.

Procedure

Parents were administered the ER-PI and the BDI-II during the third Summer program, the final program of the intervention. Interviews were conducted by trained assessment technicians who had no previous relationship with the respondent and were not knowledgeable of the Early Risers program. In our sample of poor urban neighborhoods, literacy of parents/guardians was a concern. Therefore, both the ER-PI and BDI-II were read verbatim by technicians who recorded parent responses. With the ER-PI, technicians were permitted to clarify any item that was ambiguous to the respondent.

RESULTS

Preliminary Analyses on the ER-PI

Preliminary analyses were conducted to examine internal consistency of the ER-PI. Ratings were reversed prior to conducting any analysis, so that higher scores reflected greater perceived barriers. Alphas for the total barrier scores for each component program ranged from .89 to .93 (Summer program, $\alpha = .91$, After-School program, $\alpha = .89$, Family Skills program, $\alpha = .90$, and Family Support program, $\alpha = .93$). One-month test-retest reliability for the measure ranged from .77 to .99.

To examine the four-domain structure of the measure, confirmatory factor analyses (CFA) were done for each program using AMOS v2.0. Fit indices (CFI, >.90; GFI, >.90; and RMSEA <.05) were used to evaluate goodness-of-fit of the models. CFAs on the data for each program showed that the four-domain structure did not fit well with the data.[3] Interestingly, Kazdin, Holland, Crowley, and Breton

[3]A three-factor structure of the measure, combining stressors/obstacles and demand domains, was tested to examine if the three-factor structure would yield a better fit. Fit indices did not meet the goodness of fit criteria.

(1997) also found that the four-domain structure did not fit well with their data, and instead used a total barriers score in their study. Examination of distributions of ratings for each individual item showed that data were highly skewed with little variability. Most of the items had a mean of 2 (2 = disagree), median of 2, mode of 2, and a *SD* of 0.69. We, then, examined raw responses and collected anecdotal reports from assessment technicians. This approach revealed that parents were responding to the interview items as if they were yes/no response questions: Parents would say "disagree/no" to most of the items that were not perceived as barriers and then would say "yes, agree" to items that were perceived as major barriers to participation in a program component. Parents seemed to have difficulties in rating the barrier items from Strongly Disagree to Strongly Agree. They preferred to give "yes" answers to items they thought were actual barriers to participation and vice versa. In light of these findings, a decision was made to convert the rating scales into yes/no responses, and calculate a total barrier score for each program by summing up total "yes" responses within each component. Responses of strongly agree and agree were coded as "yes (1)" and unsure, disagree and strongly disagree responses were coded as "no (0)." A total number of "yes (1)" responses was summed for each component. In our sample, total barrier scores ranged from 0 to 16 for Summer program ($M = 2.38$, $SD = 2.82$, median = 2.00, $\alpha = .78$), 0 to 13 for After-School program ($M = 1.74$, $SD = 2.38$, median = 1.00, $\alpha = .77$), 0 to 10 for Family Support program ($M = 1.08$, $SD = 1.88$, median = 0, $\alpha = .76$), and 0 to 9 for Family Skills program ($M = 1.86$, $SD = 2.07$, median = 1.00, $\alpha = .69$). Alpha reliabilities indicated that the total barrier scale for each program component had adequate internal consistency.

Table II presents correlations (Spearman's rho) between ER-PI barrier total score for each component and child, parent, and family characteristics. For the Summer program, After-School program, and Family Support program, the ER-PI barrier total scores had significant correlations with participation. The correlation for the Family Skills program approached significance ($p = .053$). It is speculated that the very poor participation rates in the Family Skills program might have yielded this result. Most of the correlations of barrier score and child, parent, and family characteristics were low and nonsignificant with some exceptions such as parent depression scores and child's disruptiveness score. Similar findings were reported in Kazdin, Holland, Crowley, and Breton (1997). The low correlation coefficients indicate that there is little shared variance between the barrier score and the child, parent, and family variables and thus provide evidence that the barrier score offers unique data.

Parents' Perceived Barriers and Participation

For each program component, hierarchical logistic regression analysis was conducted to examine whether child, parent, and family characteristics predicted

Table II. Correlations (Spearman's rho) between ER-PI Barriers Total Score for Each Program and Child, Parent, and Family Characteristics

Variable	Total barriers score			
	Summer program	After-school program	Family support program	Family skills program
Attendance	−.29***	−.34***	−.18*	−.17**
F, P, and C Characteristics				
SES	.16	.15	.03	.02
Single parent (%)	.04	.03	.04	.04
Income level	−.12	−.05	−.03	.04
Number of siblings living with child	−.10	−.04	.05	−.03
# of times moved in past year	−.07	−.11	−.09	.02
Female caretaker age (years)	−.02	.03	.01	.02
Parent depression	.11	.21*	.19*	−.02
Child disruptiveness score (TOCA-R)	−.10	−.18*	−.05	.01

Note. ns, 123–138; ER-PI, Early Risers Participation Interview; TOCA-R, Teacher Observation of Classroom Adaptation-Revised (Werthamer-Larsson, et al., 1991); SES, Socioeconomic status based on Hollingshead's (1975) Four-Factor Index.
*$p < .05$. ***$p < .001$. **$p = .053$.

high (1) vs. low (0) participators in each component and then whether ER-PI component total scores provided a significant increment to the prediction. In the first step of the analysis eight child, parent, and family variables (SES, single parent household, income level, number of siblings, number of times moved in past year, mother's age, parent depression and child's initial disruptiveness score) were entered in the model. In the second step, total barrier score for the component was included in the model. Next we selected and reported three barrier items for each component that had the highest endorsement by the low participators to see which barriers were the greatest impediments to participation.

Summer Program

Table III presents means and standard deviations (or proportions) for low vs. high participator groups on the ER-PI, attendance in the summer program, and child, parent, and family characteristics. There were significant group differences in ER-PI total score and in attendance. Low participators reported experiencing more barriers to participation compared to high participators. There was no group difference in any of the child, parent, and family characteristics variables.

Hierarchical logistic regression analysis revealed that the eight child, parent, and family characteristics, entered together, did not significantly predict low vs. high participator groups (model $\chi^2(8, N = 114) = 12.23$, $p = .14$, $R^2 = .16$).[4]

[4]Because of missing data in the independent variables, total number of participants included in the logistic analyses was $N = 114$. There were no significant baseline characteristic differences between those who were included in the analysis and those who were excluded due to missing data. When

Table III. Means and Standard Deviations (or Proportions) for ER-PI, Participation in Program, and Family, Parent, and Child Characteristics for Yr 3 Summer Program and Yr 2 After-School Program

	Summer program participators						After-school program participators					
	Low ($n = 112$)		High ($n = 26$)				Low ($n = 111$)		High ($n = 27$)			
Variable	M (or %)	SD	M (or %)	SD	t or χ^2	p	M (or %)	SD	M (or %)	SD	t or χ^2	p
ER-PI total score	2.62	2.82	1.38	2.62	2.03	.044	1.97	2.49	0.78	1.55	2.38	.019
Participation in Program (max = 24 sess.)	1.11	2.75	18.81	4.74	25.4	<.001	1.79	4.76	42.8	9.29	32.4	<.001
F, P, and C Characteristics												
SES	34.17	7.20	34.88	6.81	0.44	.658	34.31	7.20	34.31	6.82	0.01	.997
Single parent (%)	65		48		2.59	.108	57		81		4.86	.027
Income level	3.16	1.70	2.93	1.61	0.63	.531	3.01	1.61	2.85	1.71	0.46	.648
Number of siblings living with child	2.28	1.50	2.24	1.64	0.12	.903	2.52	1.52	1.31	1.12	3.80	<.001
# of times moved in past year (%)					0.98	.613					5.95	.051
None	72		72				73		65			
Once	22		16				22		15			
Twice or more	7		12				5		19			
Female caretaker age (years)	32.73	7.91	34.18	6.97	0.79	.429	33.40	7.78	31.29	7.52	1.20	.232
Parent depression	7.71	6.90	6.99	6.97	0.48	.632	6.91	6.15	10.21	8.96	2.26	.026
Child disruptiveness score (TOCA-R)	2.35	0.88	2.67	1.08	1.63	.105	2.39	0.91	2.50	0.99	0.57	.568

Note. C, child; ER-PI, Early Risers Participation Interview; F, family; P, parent; SES, Socioeconomic status based on Hollingshead's (1975) Four-Factor Index; TOCA-R, Teacher Observation of Classroom Adaptation-Revised (Werthamer-Larsson, et al., 1991).

Among the eight variables, only the single parent status (single parent yes = 1, no = 0) explained significant, unique variance to the prediction ($\beta = -1.35$, Wald $\chi^2(1, N = 114) = 4.48$, $p = .03$, odds ratio (OR) = 0.26, 95% confidence interval (CI) = 0.07–0.90). The significant odds ratio indicated that the odds of being a high participator decrease by 74% for children from single parent status families. In the next step, after controlling for these characteristics, parent total barrier scores were entered in the equation and shown to add significant variance to the prediction (model $\chi^2(1, N = 114) = 7.55$, $p = .006$, R^2 change = .10). Odds ratio of 0.72 for the barrier score ($\beta = -0.33$, Wald $\chi^2(1, N = 114) = 5.61$, $p = .018$, 95% CI = 0.55–0.94) indicated that the odds of being a high participator decreased by 28% for one unit increase in the barrier score.

One of our main goals of this study was to understand low participation in the summer program. We were interested in which barrier items were the greatest impediments for our sample of low participators. The top three items that had the highest endorsements by the low participators included 32% that reported that "my child was in other activities," followed by 30% that "my child was away for the summer," and 26% "getting to and from the program was a problem."

After-School Program

Means and standard deviations (or proportions) are presented in Table III for low vs. high participator groups on the ER-PI, attendance in the After-School program, and child, parent, and family characteristics. A significant relation was found between ER-PI total barrier score and attendance. There were significant group differences in sib-ship and parent depression score. High attenders lived with smaller size of sib-ship and with primary caregivers who showed greater depression scores, compared to their counterparts.

Hierarchical logistic regression analysis showed that the eight child, parent, and family characteristics, entered together, significantly predicted low vs. high participator groups (model $\chi^2(8, N = 114) = 29.55$, $p < .001$, $R^2 = .36$). Of the eight variables, parent's depression score ($\beta = 0.11$, Wald $\chi^2(1, N = 114) = 7.35$, $p = .007$, OR = 1.11, 95% CI = 1.03-1.20) and size of sib-ship ($\beta = -0.84$, Wald $\chi^2(1, N = 114) = 10.77$, $p = .001$, OR = 0.43, 95% CI = 0.26–0.71) were significant predictors. The odds ratio of parent's depression score indicated that the odds of being a high participator increase by 111% with one unit increase in parent's depression score. For sib-ship size, odds ratio of 0.43 indicated that the odds of being a high participator decrease by 67% with one unit increase in the number of siblings. In the next step, after controlling for these characteristics, parent total barrier scores were entered in the equation and shown to add significant

missing values were imputed using the expectation maximization algorithm and all participants ($N = 138$) were included in the analyses, results yielded same significant findings as those reported in the Results section.

variance to the prediction (model χ^2 $(1, N = 114) = 22.09$, $p < .001$, R^2 change $= .21$). Odds ratio of 0.41 for the barrier score ($\beta = -0.90$, Wald $\chi^2(1, N = 114) = 12.77$, $p < .001$, 95% CI = 0.25–0.67) indicated that the odds of being a high participator decrease by 59% for one unit increase in the barrier score.

To understand low participation rate in the After-School program, we looked at the top three items next endorsed by the low participators. Thirty-two percent of the low participators stated that "getting to and from the program sessions was a problem," 23% said that "my child was in other activities," 17% stated that "my child changed schools" and 17% stated that "my child lost interest."

Family Support Program

Means and standard deviations (or proportions) on variables for low and high participator groups are presented in Table IV. Comparisons between the low and high participator groups showed that there were significant group differences in ER-PI score and in number of contacts with the family advocates. Group comparisons on the child, parent, and family characteristics showed that the high participators in the family support program had significantly lower SES scores than the low participators.

Hierarchical logistic regression analysis detected no significant child, parent, and family predictors of low vs. high participator groups (model $\chi^2(8, N = 114) = 11.78$, $p > .05$, $R^2 = .13$). After controlling for these characteristics, parent's perceived barrier scores were shown to add significant variance to the prediction (model $\chi^2(1, N = 114) = 5.65$, $p < .05$, R^2 change $= .06$). Odds ratio of 0.75 for the perceived barrier score ($\beta = -0.29$, Wald $\chi^2(1, N = 114) = 4.62$, $p < .05$, 95% CI = 0.57–0.97) indicated that the odds of being a high participator decreased by 25% for one unit increase in the barrier score.

Next, we looked at the top three items that had the highest endorsements by the low participators. Twenty-two percent of the low participators said that "the family advocate did not try to reach me enough," 19% said that "after other activities, I was too tired to participate," 14% said that "crises at home made it difficult to participate," another 14% said that "I did not understand what the program was about," and another set of 14% said that "I moved out of the area."

Family Skills Program

In Year 2, there were only 12 parents (9%) who attended four or more sessions out of the total six sessions offered for the PEAK program. Applying inferential statistics was deemed invalid due to low sample size for the high participator group, and thus was not conducted. However, the three items with the highest endorsements by the low participators ($n = 126$) included 39% of the low participators said that "too many other things were going on at the same time,"

Table IV. Means and Standard Deviations (or Proportions) for ER-PI total score, Participation in Program, and Family, Parent, and Child Characteristics for Yr 2 Family Support Program and Yr 2 Family Skills Program

	Family support program participators						Family skills program participators[a]			
	Low (n = 59)		High (n = 79)				Low (n = 126)		High (n = 12)	
Variable	M (or %)	SD	M (or %)	SD	t or χ^2	p	M (or %)	SD	M (or %)	SD
ER-PI total score	1.54	2.16	0.73	1.57	2.55	.012	1.90	2.05	1.33	2.35
Participation in Program (max = 24 sess.)	2.22	1.76	16.09	10.7	9.83	<.001	0.06	0.33	5.17	0.84
F, P, and C Characteristics										
SES	35.87	8.02	33.18	6.17	2.15	.033	34.16	7.12	35.75	7.09
Single parent (%)	59		64		0.30	.584	61		75	
Income level	3.17	1.61	2.84	1.63	1.13	.261	3.01	1.61	2.85	1.71
Number of siblings living with child	2.19	1.47	2.33	1.57	0.53	.599	2.36	1.56	1.42	0.79
# of times moved in past year (%)					2.67	.263				
None	72		72				74		50	
Once	25		18				21		17	
Twice or more	4		11				5		33	
Female caretaker age (years)	34.02	7.91	32.19	7.57	1.31	.195	33.20	7.80	31.08	7.27
Parent depression	6.51	5.78	8.36	7.54	1.55	.124	7.52	6.89	8.15	7.17
Child disruptiveness score (TOCA-R)	2.24	0.86	2.53	0.96	1.82	.071	2.37	0.90	2.87	1.08

Note. C, child; ER-PI, Early Risers Participation Interview; F, family; P, parent; SES, Socioeconomic status based on Hollingshead's (1975) Four-Factor Index; TOCA-R, Teacher Observation of Classroom Adaptation-Revised (Werthamer-Larsson, et al., 1991).
[a]Statistical group comparisons were not conducted because of small sample size in the high participator group.

25% said "I was too tired at the end of the day to participate," and 22% said "the scheduled time of the program was bad for me."

DISCUSSION

The present study examined barriers to program participation experienced by families enrolled in Early Risers, an evidence-based prevention program that was directed and implemented by a community agency serving families residing in low-income urban neighborhoods. These barriers were modified from a list of the most frequently reported causes of poor participation and retention observed in children's mental health treatment programs (Armbruster & Kazdin, 1994; Kazdin & Mazurick, 1994; Kazdin, Stolar, & Marciano, 1995) as well as population-based, family-focused prevention programs (Spoth & Redmond, 2000). Information about barriers was obtained directly from parents via attitudes self-reported during semi-structured interviews. Multiple barriers were identified. These barriers contributed to lower participation and made a unique contribution to rates of participation beyond that contributed by child, parent, and family characteristics.

Different barriers appeared to account for lower participation in the program's child-focused versus parent and family-focused intervention components. Children's participation was linked to practical obstacles, such as being involved in competing activities, unreliable transportation, and school transfers. In contrast to child participation, parent participation reflected barriers from multiple domains, including obstacles/stressors (e.g., crises at home, too tired, too many other things going on), demands imposed by the program (e.g., inconvenient scheduling of activities), relevance (e.g., did not understand what the program was about) and relationship with provider (e.g., provider did not try to contact me).

Child, parent, and family characteristics contributed little to participation. This is consistent with Spoth, Goldberg, and Redmond (1999) who failed to find any family risk factors as significant predictors of participation in universal, family-focused preventive interventions. This is in contrast to studies examining short-term mental health treatments that have found that factors such as single-parent status, child's symptom severity, social isolation, and maternal depression account for differences between ethnic groups and leaving treatment (Armbruster & Kazdin, 1994; Kazdin & Mazurick, 1994; Kazdin et al., 1995).

Practical obstacles were clearly the most common barriers affecting child attendance reported by parents in the present study. We anticipated that offering child program activities during the summer months or after-school during the school year would take advantage of key times when parents were seeking childcare services or supervised activities. However, these also were times when children were visiting relatives or involved in competing activities. We also expected that offering the program at neighborhood centers would offer easy access

to both child and parent participants. Centers were embedded in neighborhoods where participants lived and worked. For many families, the center filled a social niche for affiliation and an acceptable resource for support and service. Unfortunately, neighborhood centers serving as venues in the present study were located in the most dangerous areas of the city. Consequently, parents as well as children were reluctant to walk to a center in the evening hours, during inclement winter conditions, or after an incident of crime in the neighborhood. In addition, many families changed residence during the trial, moving a substantial distance from the service area. In such cases the lack of reliable personal transportation was a prohibitive factor.

Research conducted with universal prevention programs has found that program relevance and provider-client relations were linked to poor rates of parent participation (Spoth, Redmond, et al., 1996; Spoth et al., 1999). Families invited to participate in universal prevention programs are not typically seeking help for their child nor aware of the risks to their children for health-compromising behaviors. Consequently, motivation to participate in universal programs may be quite low. Even in targeted prevention programs like Early Risers, participants are approached before problem behaviors have fully crystallized and distress over child management is still relatively low. However, early engagement and strengths-based explanations about the benefits of program participation can help overcome these barriers (Spoth, Redmond, et al., 1996). Indeed, there is a growing literature regarding the importance of attending to parents' pre-intervention motivations and cognitions relevant to the intervention (Miller & Prinz, 2003; Morrissey-Kane & Prinz, 1999; Nock & Kazdin, 2001). Closer attention to parent motivations and expectations might lead to participant-focused program prescriptions that match various intervention components to the needs of the child or preferences of the parent (Miller & Prinz, 2003). Permitting families to collaborate with practitioners in their intervention planning may improve child and parent participation.

The findings from this community-directed prevention trial highlight the unfortunate fact that numerous participation barriers exist at multiple levels of the broader ecology, preventing many families from benefiting from the full array of prevention services. A number of solutions and strategies for increasing participation in prevention programs may be suggested from the present study as well as other studies (Prinz et al., 2001). The most direct solution is to reduce practical barriers and improve access to the program. This can be accomplished by providing transportation, on-site childcare for siblings, refreshments, or financial compensation. Unfortunately, all of these strategies increase the cost of the program to the host organization. A number of practical solutions can be proffered from the mental health treatment services literature (for a review see Snell-Johns et al., 2004). Identified strategies include (a) using a telephone engagement strategy at initial contact (McKay, McCadam, & Gonzales, 1996), (b)

providing home-based-services (Henggeler, Pickrel, Brondino, & Crouch, 1996; Kinney & Ditmar, 1995), (c) using self-directed and video-based interventions (Webster-Stratton, 1994), and (d) using multiple family group formats (McKay, Gonzales, Stone, Ryland, & Kohner, 1995).

Home-based service delivery options may be particularly useful in underserved populations. Several program developers have demonstrated positive outcomes with hard-to-reach families using natural community settings such as client homes (e.g., Henggeler, 1999; Kinney & Ditmar, 1995; Sanders, 1999). In addition to affording easy access, intervention in the home may lessen the stigma often associated with receiving assistance from service agencies, enhance parents' acceptance through the personal rapport and alliance-building that is facilitated by a more intimate client-provider relationship, and increase the likelihood that the skills families learn will generalize to other natural settings (Kinney & Ditmar, 1995).

A broader implication of this study is that community agencies need resources to overcome participation barriers. Successful adoption and sustainability of community-based preventive interventions requires collaboration with community stakeholders (McKay et al., 1996; Winn & Herman, 2004). When community leaders and consumers have a stake in the outcomes targeted by the program and actively participate in shaping solutions to problems, such as removing barriers to participation, they are in turn, more likely to succeed. Shared ownership of a program can generate a ground swell of support among community stakeholders that can act to divert existing funding streams or access new funding sources to implement and sustain evidence-based prevention programs in the community (August, Winters, et al., 2004).

Our finding of poor fit results of the four-domain structure of the ER-PI warrants comment. It would be hard to draw a conclusion from our data that this is a one-factor measure assessing barriers in general, since the generalizability of our finding is limited within our sample's population. Interestingly, in a sample of mental health treatment seekers Kazdin, Holland, Crowley, and Breton (1997) were also unable to validate the four domains and therefore used a total barrier score, rather than separate domain scores, to represent their BTPS scale. It could be that Kazdin's measure of barriers assesses one factor of barriers in general and that other measures of barriers assesses multiple constructs (e.g., Duran et al., 2005). Future studies investigating the factorial structure of the ER-PI in different populations are needed.

This study had several limitations. First, it should be noted that the Early Risers Program is a targeted intervention (e.g., prevention services for a family with a child identified at heightened risk for developing a problem) delivered with high intensity over an extended period of time. Participation barriers associated with this multicomponent intervention are probably different from those that may be found with less intensive, universal interventions delivered to a general

population. Second, the relatively small sample size of the high participator group thwarted efforts to understand differences between endorsed barriers among groups. Third, in this study we were unable to test our hypotheses of relationships between specific barrier domains and program components as stated in the introduction. The unfortunate loss of variance in the ratings may have affected the validation results of the four domains (i.e., unable to validate the four domains), which have prevented us from testing the hypotheses. Based on our experience in the present study, we think that having yes/no responses instead of Likert-type ratings would be easier for study samples as ours (i.e., urban sample) to complete the barrier measure. We also surmise that different study populations may have different response styles when completing a measure of this nature. To determine whether perceived barriers should be rated on a spectrum or assessed via yes/no responses, further research is needed using different types of study samples.

Finally, the timing of the administration of the ER-PI may have prevented accessing information about a special class of low participators, namely early drop-outs. The ER-PI was administered at the end of the intervention rather than at the point at which families terminated the study. Thus, no barrier data were collected for drop-outs. Questions about the range of barrier scores or the pattern of barriers endorsed or the importance of child, parent, and family factors in attrition could therefore not be answered. Nonetheless, the lessons learned from this study suggest that program implementers need to take seriously the accessibility and acceptability of barriers to their programs. Strategies to overcome these barriers to participation should assume a more prominent part in planning intervention design, implementation, and delivery in the future. The study of participation factors provides a basis for the development of empirically-derived, tailor-fit recruitment and retention strategies.

APPENDIX

Items of the Early Risers Participation Interview (ER–PI)

Summer program
Stressors/Obstacles
My child was in other activities
The program added another hassle to my life
The program took time away from my family
I had other children
My child refused to come to the Summer program
Relevance
The Summer program didn't seem necessary
The Summer program was not what I expected
My child lost interest
My child had new or different problems
My child was away for the summer

Appendix. Continued

Demands
- Lasted for too many weeks
- Lasted for too many hours in a day
- Did not have enough input about the program
- I moved out of the area (too far to attend)
- My child changed schools
- Getting to and from the program sessions was a problem

Relations
- I did not like the program staff
- Staff did not seem confident the program would work
- Staff were unable to deliver the program
- My child did not seem to like the staff

After-School program

(includes same four domains and items as the Summer program)

Family Support program

Stressors/Obstacles
- I was too stressed
- Crises at home made it difficult to participate
- The program added another hassle to my life
- After other activities, I was too tired to participate

Relevance
- The program did not seem necessary
- The program was not what I expected
- The program did not seem interesting
- It didn't provide enough assistance to myself or family
- My life seems to have improved, therefore not necessary

Demands
- I didn't understand what the program was about
- I felt the program was more work than expected
- It was difficult to find a comfortable place to meet
- Did not have enough input in program
- I moved out of the area
- I felt the program took too much of my own time
- Connecting on the phone, or in person, was a hassle

Relations
- The Family Advocate was hard to get along with
- I had to give too much personal information
- The Family Advocate didn't supported me or my efforts
- The Family Advocate didn't try to reach me enough
- I felt like the Family Advocate was unable to help me

Family Skills program

Stressors/Obstacles
- Getting to and from the program was a problem
- Too many other things going on at the same time
- The program added another hassle to my life
- I was too tired at the end of the day to participate
- Childcare was a hassle

Relevance
- The program did not seem necessary
- The program was not what I expected
- The program didn't seem very interesting
- The program did not focus on my life and problems
- I didn't feel the program would help my child
- I didn't feel the program would help me or my family

Appendix. Continued

Demands
The program lasted too many weeks
The program was too much of a hassle
I felt uncomfortable going to the center
I moved out of the area
The scheduled time of the program was bad for me
Relations
The Family Advocate was hard to get along with
I did not like the presenter(s)
The Family Advocate didn't encourage me to go
The Family Advocate didn't give me enough information to attend
I don't like going to groups

ACKNOWLEDGMENT

This study was supported by an award from the National Institute of Mental Health [MH 63328].

REFERENCES

Armbruster, P., & Kazdin, A. E. (1994). Attrition in child psychotherapy. In T. H. Ollendick & R. J. Prinz (Eds.), *Advances in clinical psychology: Vol. 16* (pp. 81–108). New York: Plenum.

August, G. J., Hektner, J. M., Egan, E. A., Realmuto, G. M., & Bloomquist, M. L. (2002). The Early Risers longitudinal prevention trial: Examination of 3-year outcomes in aggressive children with intent-to-treat and as-intended analyses. *Psychology of Addictive Behaviors*, *16,* 27–39.

August, G. J., Lee, S. S., Bloomquist, M. L., Realmuto, G. M., & Hektner, J. M. (2003). Dissemination of an evidence-based preventive innovation for aggressive children living in diverse, urban neighborhoods. *Prevention Science*, *4,* 271–286.

August, G. J., Lee, S. S., Bloomquist, M. L., Realmuto, G. M. & Hektner, J. M. (2004). Maintenance effects of an evidence-based preventive innovation for aggressive children living in culturally diverse, urban neighborhoods: The Early Risers effectiveness study. *Journal of Emotional and Behavioral Disorders*, *12,* 194–205.

August, G. J., Realmuto, G. M., Hektner, J. M., & Bloomquist, M. L. (2001). An integrated components preventive intervention for aggressive elementary school children: The Early Risers program. *Journal of Consulting and Clinical Psychology*, *69,* 614–626.

August, G. J., Winters, K. C., Realmuto, G. M., Tarter, R., Perry, C., & Hektner, J. M. (2004). Moving evidence-based drug abuse prevention programs from basic science to practice: "Bridging the efficacy-effectiveness interface." *Substance Use & Misuse*, *39,* 2017–2053.

Barrrera, M., Biglan, A., Taylor, T. K., Gunn, B. K., Smolkowski, K., Black, C., et al. (2002). Early elementary school intervention to reduce conduct problems: A randomized trial with Hispanic and non-Hispanic children. *Prevention Science*, *3,* 83–94.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Beck depression inventory manual* (2nd edn.). San Antonio, TX: Psychological Corp.

Bloomquist, M. L., August, G. J., Lee, S. S., Berquist, B. E., & Mathy, R. (2005). Targeted prevention of antisocial behavior in children: The Early Risers "Skills for Success" Program. In R. G. Steele & M. C. Roberts (Eds.), *Handbook of mental health services for children, adolescents, and families* (pp. 201–214). New York: Kluwer-Academic/Plenum Publishers.

Conduct Problems Prevention Research Group (1999). Initial impact of the Fast Track prevention trial for conduct problems: I. The high-risk sample. *Journal of Consulting and Clinical Psychology*, *67,* 631–647.

Conduct Problems Prevention Research Group (2002). The implementation of the Fast Track Program: An example of a large-scale prevention science efficacy trial. *Journal of Abnormal Psychology*, *30,* 1–17.

Duran, B., Oetzel, J., Lucero, J., Jiang, Y., Novins, D. K., Manson, S., et al. (2005). Obstacles for rural American Indians seeking alcohol, drug, or mental health treatment. *Journal of Consulting and Clinical Psychology*, *73,* 819–829.

Gorman-Smith, D., Tolan, P. H., Henry, D. B., Leventhal, A., Schoeny, M., Lutovsky, K., et al. (2002). Predictors of participation in a family-focused preventive intervention for substance use. *Psychology of Addictive Behaviors*, *16*(4S), S55–S64.

Henggeler, S. W. (1999). Multisystemic therapy: An overview of clinical procedures, outcomes and policy implications. *Child Psychology and Psychiatry Review*, *4,* 2–10.

Henggeler, S. W., Pickrel, S. G., Brondino, M. J., & Crouch, J. L. (1996). Eliminating (almost) treatment dropout of substance abusing or dependent delinquents through home-based multisystemic therapy. *American Journal of Psychiatry*, *153,* 427–428.

Hollingshead, A. (1975). *Four factor index of social status*. New Haven, CT: Yale University.

Kazdin, A. E., Holland, L., & Breton, S. (1991). *Barriers to Participation in Treatment Scale-Parent and therapist versions.* New Haven, CT: Yale University.

Kazdin, A. E., Holland, L., & Crowley, M. (1997). Family experience of barriers to treatment and premature termination from child therapy. *Journal of Consulting and Clinical Psychology*, *65,* 453–462.

Kazdin, A. E., Holland, L., Crowley, M., & Breton, S. (1997). Barriers to treatment participation scale: Evaluation and validation in the context of child outpatient treatment. *Journal of Child Psychology and Psychiatry*, *38,* 1051–1062.

Kazdin, A. E., & Mazurick, J. L. (1994). Dropping out of child psychotherapy: Distinguishing early and late dropouts over the course of treatment. *Journal of Clinical Child Psychology*, *62,* 1069–1074.

Kazdin, A. E., Stolar, M. J., & Maricano, P. L. (1995). Risk factors for dropping out of treatment among white and black families. *Journal of Family Psychology*, *9,* 402–417.

Kinney, J. D., & Ditmar, K. (1995). Homebuilders: Helping families help themselves. In I. M. Schwartz & P. AuClaire (Eds.), *Home-based services for troubled children* (pp. 29–54). Lincoln, NE: University of Nebraska Press.

Lochman, J. E., & the Conduct Problems Prevention Research Group (1995). Screening of child behavior problems for prevention programs at school entry. *Journal of Consulting and Clinical Psychology*, *6,* 549–559.

McKay, M. M., Gonzales, J. J., Stone, S., Ryland, D., & Kohner, K. (1995). Multiple family therapy groups: A responsive intervention model for inner city families. *Social Work With Groups*, *18,* 41–56.

McKay, M. M., McCadam, K., & Gonzales, J. J. (1996). Addressing the barriers to mental health services for inner city children and their caretakers. *Community Mental Health Journal*, *32,* 353–361.

Miller, G. E., & Prinz, R. J. (2003). Engagement of families in treatment for childhood conduct problems. *Behavioral Therapy*, *34,* 517–534.

Morrissey-Kane, E., & Prinz, R. J. (1999). Engagement in child and adolescent treatment. The role of parent cognitions and attributions. *Clinical Child and Family Psychology Review*, *2,* 183–196.

Nock, M. K., & Kazdin, A. E. (2001). Parent expectancies for child therapy: Assessment and relation to participation in treatment. *Journal of Child and Family Studies*, *10,* 155–180.

Orrell-Valente, J. K., Pinderhughes, E. E., Valente, E., & Laird, R. D. (1999). If it's offered, will they come? Influences on parents' participation in a community-based conduct problems prevention program. *American Journal of Community Psychology*, *27,* 753–783.

Prinz, R. J., Smith, E. P., Dumas, J. E., Laughlin, J. E., White, D. W., & Barron, R. (2001). Recruitment and retention of participants in prevention trials involving family-based interventions. *American Journal of Preventive Medicine*, *20*(Suppl 1), 31–37.

Reid, J. B., Eddy, J. M., Fetrow, R. A., & Stoolmiller, M. (1999). Description and immediate Impacts of a preventive intervention for conduct problems. *American Journal of Community Psychology, 27,* 483–517.

Sanders, M. R. (1999). Triple-P Positive Parenting Program: Towards an empirically validated Multilevel parenting and family support strategy for the prevention of behavior and emotional problems in children. *Clinical Child and Family Psychology Review*, *2,* 71–90.

Snell-Johns, J., Mendez, J. L., & Smith, B. H. (2004). Evidence-based solutions for overcoming access barriers, decreasing attrition, and promoting change with underserved families. *Journal of Family Pyschology*, *18,* 19–35.

Spoth, R., Ball, A. D., Klose, A., & Redmond, C. (1996). Illustration of a market segmentation technique using family-focused prevention program preference data. *Health Education Research*, *11,* 259–267.

Spoth, R., Goldberg, C., & Redmond, C. (1999). Engaging families in longitudinal preventive intervention research: Discrete-time survival analysis of socioeconomic and social-emotional risk factors. *Journal of Consulting and Clinical Psychology*, *67,* 157–163.

Spoth, R., & Redmond, C. (1993). Study of participation barriers in family-focused prevention: Research issues and preliminary results. *International Quarterly of Community Health Education*, *13,* 365–388.

Spoth, R., & Redmond, C. (1995). Parent motivation to enroll in parenting skills programs: A model of family context and health belief predictors. *Journal of Family Psychology*, *9,* 294–310.

Spoth, R., & Redmond, C. (2000). Research on family engagement in preventive interventions: Toward improved use of scientific findings in primary prevention practice. *Journal of Primary Prevention*, *21,* 267–284.

Spoth, R., Redmond, C., Hockaday, C., & Shin, C. Y. (1996). Barriers to participation in family skills preventive interventions and their evaluations: A replication and extension. *Family Relations*, *45,* 247–254.

Webster-Stratton, C. (1994). Advancing videotape parent training: A comparison study. *Journal of Consulting and Clinical Psychology*, *62,* 583–593.

Webster-Stratton, C. (1996). Early intervention with videotaped modeling: Programs for families of children with oppositional defiant or conduct disorder. In E. D. Hibbs & P. S. Jensen (Eds.), *Psychosocial treatments for child and adolescent disorders: Empirically based strategies for clinical practice* (pp. 435–474). Washington, DC: American Psychological Association.

Werthamer-Larsson, L., Kellam, S. G., & Wheeler, L. (1991). Effects of first grade classroom environment on shy behavior, aggressive behavior, and concentration problems. *American Journal of Community Psychology*, *19,* 585–602.

Winn, D. C., & Herman, M. G. H. (2004). Research meets the real world: Lessons learned in three community implementations of Fast Track. In J. B. Kupersmidt & K. A. Dodge (Eds.), *Children's peer relations: From development to intervention* (pp. 223–240). Washington, DC: American Psychological Association Press.