School-Based Prevention and Intervention Programs for Children with Emotional Disturbance

Linda A. Reddy and Laura Richardson
Fairleigh Dickinson University

Abstract

Children and adolescents with emotional disturbance (ED) exhibit chronic and diverse academic, emotional, behavioral, and/or medical difficulties that pose significant challenges for their education and treatment in schools. Historically, children with ED have received fragmented inadequate interventions and services that often yielded unfavorable school and community outcomes. Numerous child/family, diagnostic, and organizational barriers limit access to appropriate and effective treatment. Given this information, two U.S. Presidential commissions (U.S. Surgeon General Report, 2000; President's Freedom Commission on Mental Health, 2003) have called for the transformation of the mental health system emphasizing the early identification and intervention of children at risk for and with ED in school and public health care settings. In this manuscript, three school-based prevention and intervention programs for children at risk for and with ED are presented as examples of exemplary programs. These programs were selected based on a review of over 26 published school-based outcome studies with this population and the availability of at least three published outcome studies (including follow-up data) for each. Considerations for future school prevention and intervention programs are offered. Finally, priorities for training school personnel are outlined.

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Children with emotional disturbance (ED) are one of the most underidentified and untreated child clinical subpopulations (Wagner, 1995; Forness & Kavale, 2001; President's New Freedom Commission, 2003). As indicated in the Surgeon General's report on mental health (U.S. Department of Health and Human Services, 2000), one in five children display a diagnosable mental disorder each year and approximately 5% have an ED that significantly impacts their daily functioning at home and school. Similarly, children with ED represent about 5% of youth diagnosed with mental disorders and

Correspondences to Linda A. Reddy at Fairleigh Dickinson University, Child/Adolescent ADHD Clinic, 1000 River Road, Teaneck, NJ. 07666; E-mail: LReddy2271@aol.com or Reddy@FDU.edu.
about 1% of those children diagnosed with ED are treated (Oswald & Coutinho, 1995; Walwarth, Nickerson, Crowel, & Leaf, 1998). Research has found that the number of students classified as ED varies by state and school district. For example, in a study representing over 14,000 school districts, Coutinho and Oswald (2005) found that state and local variations in ED classification are due, in part, to the child’s gender with males overrepresented as ED (e.g., male: female odds ratios ranged from approximately 2 to 6 for ED in comparison to 1.7 to 2.7 for LD students). It is unknown whether gender differences are due to a higher prevalence rate of ED among males and/or under diagnosis of ED among females.

The identification of children with ED is hindered by vague diagnostic/eligibility criteria which impacts access to effective school-based interventions (Forness & Kavale, 2001; Reddy, 2001). Scholars have attributed the identification problem, in part, to the Individual Disability Education Act definition (IDEA, 1997, 2005). According to IDEA, ED is one of 12 disability categories that is defined as “a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree which adversely affects school performance: (a) an inability to learn which cannot be explained by intellectual, sensory, or health factors, (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers, (c) inappropriate types of behavior or feelings under normal circumstances, (d) a general pervasive mood of unhappiness or depression, (e) a tendency to develop physical symptoms or fears associated with personal or school problems” (IDEA, 1997, 2005). The five ED criteria in IDEA are not supported by research on the subtypes of children with emotional and behavioral disorders (Schroeder & Gordon, 2002). In addition, there is a clause requiring “adverse educational performance” (e.g., poor grades) which may be interpreted by some professionals to exclude children who have marginal grades (e.g., D's), but who exhibit social and behavioral difficulties at school. Also, IDEA includes an exclusionary criterion of “social maladjustment” which is not fully defined and thus may misled some professionals to exclude children diagnosed with conduct disorder. Research has found that conduct disorders often co-occur with attention deficit hyperactivity disorder (ADHD), reading disabilities, depressive disorders, and anxiety disorders (Hinshaw, Lahey, & Hart, 1993; Reddy & DeThomas, in press). Nelson (1992) asserted that the field does not have evidence to differentiate between conduct disorders and other emotional and behavioral disorders. In fact, students with ED who exhibit disruptive behavior or symptoms of conduct disorder constitute the largest subgroup of youth placed in ED classrooms (Greenbaum et al., 1996; U.S.
Department of Health and Human Services, 2000; Wagner, 1995).

Historically, there has been a reliance on restrictive educational and out-of-home placements (e.g., residential care) for children with ED. However, with the advent of managed care, the use of restrictive placements has decreased, and as a result, schools and community agencies have increasingly become the "system of care" for children with ED (Reddy & Savin, 2000; Weist, Evans, & Lever, 2003). Treatment outcomes (e.g., reduced aggressive and disruptive behaviors) acquired in restrictive placements are often temporary and limited in scope (e.g., behavioral control and containment). Many restrictive placements also do not successfully transition children back into their homes, schools, and neighborhoods (Epstein, Kutash, & Duchnowski, 1998; Hansen, Litzelman, March, & Milspaw, 2004).

Despite national initiatives (e.g., President's New Freedom Commission, 2003; Surgeon General Report, 2000), parents and schools struggle to educate and treat children with ED (U.S. OSEP, 2001). Described by some as "mad, bad, sad, and can't add" (Friedman & Kutash, 1986), these children are prone to academic failure, family/peer rejection, restricted educational placements, and in some cases out-of-home placements and hospitalizations. As Osher, Osher, and Smith (1994) stated, educating children with ED "is one of the most stressful, complex, and difficult challenges facing public education today, and perhaps one of our greatest failures" (p. 7). Research has shown that children with ED have lower grades than other disability groups, significant academic and language deficits, and high grade retention and absenteeism rates (Armstrong, Derick, & Greenbaum, 2003). Research has also shown that children with ED are more likely to drop out of school, receive school suspensions and expulsions, fail one or more courses, not graduate, and have difficulties socially integrating at school than other disability groups (Duchnowski, 1994; U.S. OSEP, 2001; Wagner, 1995).

Numerous personal, diagnostic, and organizational barriers interfere with treatment success for children with ED in school and home (Reddy, 2001). For example, youngsters with ED represent a complex mix of emotional, behavior, educational, and medical/neurological difficulties that make the diagnostic, teaching, and learning process difficult. School and family treatments are further complicated by high rates of family psychopathology, inadequate parenting skills, and limited support systems and resources. In addition, lack of knowledge of services and programs offered by other agencies (e.g., schools, social service, juvenile justice), differential use of terminology between agencies, and ineffective interagency collaboration often interfere with treatments. Limited or poor school preservice and
inservice training on internalizing and externalizing symptoms in the classroom and behavioral techniques (e.g., use of aversive techniques, physical restraints, positive behavioral techniques) are also found. Other barriers may include limited placement options (e.g., access to intermediate levels of care) and support services (e.g., respite for parents and teachers) (Reddy, 2001). Despite these barriers, innovations in school-based programming continue. In the past decade, new school prevention and intervention programs have emerged from school, agency, and/or university partnerships and offer promising new approaches for educating and treating children with ED.

The purpose of this paper is to present exemplary school prevention and intervention programs for children and adolescents at risk for and with ED. Three school prevention and intervention programs are described for their mission and objectives, treatment components, required material and training, and outcome findings. Considerations for future school prevention and intervention programs are offered. Finally, priorities for training school personnel are proposed.

School Prevention and Intervention Programs

To enhance the reader's appreciation of the variety of school prevention and intervention programs for children with ED, a descriptive overview of three model programs are provided. A comprehensive literature review of over 26 published outcome studies from 1998 to 2005 in over 12 peer reviewed journals was completed. Each study was reviewed on several variables (e.g., sample characteristics, treatment components, and outcome findings). As a result of the review, three programs were selected based on five criteria: (a) each program was designed specifically for children at-risk for or with ED, (b) each program focused on academic and behavior outcomes, (c) outcome data for each program was available, (d) each program had at least three published outcome studies (including follow-up data), and (e) each program was nominated by experts in the field of school psychology and child mental health as an excellent program. Based on the five criteria, two prevention programs, First Step to Success (Walker et al., 1998) and Parent Teacher Action Teams (PTAR; Kay & Fitzgerald, 1997) and one intervention program Integrated Mental Health Program (IMHP; Roberts, Jacobs, Puddy, Nyre, & Vernberg, 2003) were selected. The choice of these programs does not represent a special status,

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1 Studies were most frequently cited in the Journal of Emotional and Behavior Disorders.
2 A prevention program is defined as one that targets children that may be at-risk for a problem, but have not developed the problem itself.
3 An intervention program is defined as one that targets children who already have developed the problem.
but rather were selected to illustrate examples of well-designed data-driven school prevention and intervention programs for children at risk for and with ED. Following the summary and critique of the programs, we offer considerations for future school prevention and intervention programs for this population.

First Step to Success

First Step to Success is a home and school prevention program for at-risk kindergartners with early signs of antisocial behavior such as difficulties with peer and teacher relationships, aggressive and disruptive behavior, and internalizing behaviors such as anxiety, inattention, and withdrawn behavior in the classroom (Walker et al., 1998). The primary objective is to train at-risk children (preschool through third grade) to interact appropriately with peers and adults at school to prevent the development of long-term and more serious anti-social behavior patterns. First Step includes three modules: a proactive universal screening process; consultation-based school intervention with the child, peers, and teacher (CLASS); and intensive parent training focused on improving academic performance and adjustment (home-Base).

Screening

The centerpiece of First Step is proactive universal screening, a multi-stage process that evaluates at-risk kindergartners for emerging antisocial behavior patterns and identifies children who would most benefit from the program. During Stage one, each teacher is asked to list five children in their classroom who match a standardized description of the targeted externalizing behaviors and five children who matched standardized description of the targeted internalizing behaviors. A child cannot be placed on both lists. Teachers are asked to rank-order students in terms of the level of severity of their behavior.

During Stage two, teachers evaluate the three highest ranked children on each of the externalizing and internalizing lists using the Early Screening Project (ESP) procedure (Walker, Severson, & Feil, 1994), an extension of The Systematic Screening for Behavior Disorders (SSBD) procedure (Walker & Severson, 1990). The ESP is a multi-method, -agent, and -setting screening procedure that includes teacher rankings, ratings, and behavioral observations across the screening stages for children three to five years (Walker et al., 1998). Measures included in this procedure are the ESP Adaptive Behavior Rating Scale (Walker et al., 1998), the ESP Maladaptive Behavior Scale (Walker et al., 1998),

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4 For a more detailed description of ESP and SSBD see Severson and Walker (2002).
and the Aggression Subscale of the Teacher Report Form (TRF, Achenbach, 1991a). The goal of Stage two is to assess the children's adaptive and maladaptive behaviors compared to normative behaviors by having the teachers complete the ESP Adaptive Behavior Rating Scale, ESP Maladaptive Behavior Rating Scale, and the TRF. Students who met criteria (i.e., exceed ESP normative criteria) move to Stage three. The ESP's psychometric validity is well established and includes a national standardization sample of 2,853 children from three to six years (Walker, et. al., 1998).

During Stage three, the children are observed in their classrooms by an independent group of observers from the Oregon Research Institute (ORI), who implement the Academic Engaged Time (AET) measure (Rich & Ross, 1989). AET assesses the time the child attends to the teacher, follows directions, and/or asks for help. ORI members conduct the post-intervention and follow-up observations. The AET results are used for screening and baseline data for those enrolled in the program. Inclusion criteria are an AET of 65% or lower and/or T-score of one or more standard deviations above the mean on the TRF Aggression scale.

Treatment Components

School Intervention: CLASS. First Step uses a modified version of the CLASS Program (Hops & Walker, 1998). The program runs for 30 days with daily performance criteria each child must meet. The program consultant monitors the program in the regular classroom. Appropriate behaviors (e.g., attending to the teacher and remaining in seat) are rewarded, while inappropriate behaviors (e.g., calling out, being out-of-seat, and other disruptive behaviors) are given negative feedback. Children repeat a program day if they do not meet the criteria. On average, students take about two months to complete the program. Each day involves two 20 to 30 minute sessions where the consultant (e.g., a trained school counselor, school psychologist, resource teacher, or behavioral specialist), works one-on-one with the child and provides continuous feedback (i.e., use of red or green cards) on the appropriateness of the child's behavior. The child earns points for displaying behaviors such as following directions, completing work, and appropriate self-control. For children with less-than-average intelligence, pictorial aids and consumable rewards are substituted into the program. If the child meets the criteria for the two 20 minute sessions, a home-privilege is given to the child that day. Home privileges are negotiated with parents and may include extra play time or another reinforcing activity for that child. By day 15, the use of the red/green cards is discontinued, and the time period that the child
must be appropriate to earn the rewards is gradually increased from 30 seconds to 10 minutes. Criteria are met if the child displays appropriate behavior (e.g., follow directions, complete assigned work) for multiple days (i.e., more than 3 days) in a row. During the maintenance phase of the program (i.e., days 21 through 30), the child is rewarded primarily with verbal praise from both his/her teacher and parents. Tangible awards are given to a child for behaviors that consistently improve over three or more days (e.g., following directions and rules).

The consultant starts the program, trains teachers, negotiates with parents about appropriate rewards, and works directly with the child through day five of the program. The consultant also explains the program to the teacher, parents, child, and the child’s peers and serves as a model for the teacher and parents (Walker et al., 1998). On day six, the classroom teacher then assumes responsibility for program implementation (i.e., providing awards and points, supervising group activities, and collaborating with parents).

Home Intervention: homeBase. The home intervention is a six week curriculum that includes six one-hour lessons that enhance children’s competencies and skills in the following areas: communication and sharing in school, cooperation, limit setting, problem solving, friendship making, and the development of confidence (Walker et al. 1998). Consultants teach homeBase lessons to parents in their homes, and parents are encouraged to practice skills with their children 10 to 15 minutes daily. The homeBase program begins after the child has finished day ten of the school program.

Training/Implementation. First Step uses a trainer-of-trainers model in which “program consultants” (e.g., graduate students, teachers, school counselors, and teacher aides) receive intensive training and on-going supervision from project coordinators. Training consists of standardized lectures, videotaped demonstrations and role playing, group discussion and detailed feedback by the program coordinators. Staff and consultant training is one and one half days and teacher training is one day. On average, each consultant is assigned two to three cases over a three-month period. The consultants work with parents to help them implement home interventions for their children. The parent training is one session (one hour) per week, for six weeks to allow them to understand the basic behavioral principles involved in the program and to review specific content that they must implement with their child. After each training session, the parent is given a handbook and set of skill-based games and activities to teach their child (Golly, Stiller, & Walker, 1998).
Outcome Results

Several outcome studies support the efficacy of First Step. Results from a four-year randomized, experimental, wait-list control study found that First Step yielded statistically significant improvements in adaptive and maladaptive behaviors and sustained treatment outcomes across grade levels and home and school settings in a sample of 46 kindergarteners (Walker et al., 1998). In comparison to the wait-list, significant group differences (favoring First Step) were found on the: Adaptive Teacher Rating Scale, Maladaptive Teacher Rating Scale, TRF Aggression Scale, and AET. However, no group differences were found for internalizing behaviors.

A replication study of 20 kindergarteners, using the same procedures as Walker et al. (1998), found similar findings on the Adaptive Teacher Rating Scale, Maladaptive Teacher Rating Scale, AET, and CBCL Aggression Scale (Golly, Stiller, & Walker, 1998). Participants reported high levels of satisfaction with the training and program. However, a control group was not used. Similar to Walker et al. (1998), improvements in internalizing behaviors (e.g., social withdrawal) were not found.

Golly, Spraque, Hill, Beard, and Gorham (2000) investigated the efficacy of First Step with a multiple-baseline design with two sets of identical Caucasian male twins (age 5 years). Both sets of twins attended regular education classrooms. The intention of this investigation was to eliminate genetic differences by assigning one twin from each pair to the whole-class social-skills training only and then to the First Step program (i.e., CLASS, homeBase). Unfortunately, twin pair number one moved before the study could be completed and only received the teacher portion of the program (i.e., did not receive the homeBase intervention) and twin pair number two did not receive homeBase due to parents refusal to participate. Thus, this study only included the whole-class social-skills training and teacher intervention. Results revealed significant improvements in appropriate classroom behavior (e.g., talking out, out of seat, touching others) for all four participants and significant improvements in AET for those participants who received the teacher intervention.

Overton, McKenzie, King, and Osborne (2002) conducted a replication study of Walker et al. (1998) involving 22 kindergartners (16 males, five to six years old) from five school districts. The ethnic breakdown was five Caucasians, seven African Americans, five African American and Caucasian, one Hispanic, three Native Americans and one Native American and Caucasian. Results were somewhat comparable to the Walker et al. (1998) study. For example, positive improvements in AET at post-test and one-year follow-up were found.
Reductions in externalizing behavior as measured by the CBCL and TRF Externalizing Scales at program completion were found, but were not maintained at one-year follow-up. Differences in outcome findings may be attributed to population differences. For example, this study included families from communities with high rates of poverty and Walker et al. (1998) included families from communities with high rates of middle-class incomes.

Beard and Sugai (2004) compared the effectiveness of First Step’s teacher-directed versus teacher and parent-directed components on reducing antisocial behavior in the classroom. A total of six Caucasian kindergartners (four males) in two kindergarten classes were randomly assigned to two interventions. Four of the children lived in low income and two lived in middle income neighborhoods. Results revealed that child problem behaviors (i.e., talking out, touching others and property, being out of seat, and non-compliance) reduced to almost zero and AET increased to 90% on average. Improvements in behavior problems and AET were maintained at five month follow-up for four of the six students. Results suggested that the First Step components were equally effective in improving AET and problem behaviors in the classroom.

Commentary

First Step is a promising empirically supported program for young children at-risk for antisocial behavior patterns used in 12 states, three Canadian provinces, Australia and New Zealand. The integration of comprehensive screening, school, and home training and interventions are distinguishing features of First Step. School success is promoted through teaching children adaptive behavior such as attending to tasks, getting along with teachers, and developing positive peer relations. Parent participation is a critical element of this program. Parents are trained to reinforce children’s school behavioral improvements at home, forging a collaborative partnership between parents and school personnel.

First Step is described as a prevention program, but more accurately fits into the category of an indicated prevention intervention in that an at-risk group is targeted as having minimal but detectable symptoms that foreshadow a behavioral and/or emotional disorder, but do not presently meet the criteria of a diagnostic disorder (Pfeiffer & Reddy, 1997). This program does not target the entire school population and thus does not constitute a universal prevention program. As part of the universal screening process, teachers are asked to nominate and rate children who represent externalizing and internalizing behavior patterns, complete five checklists, and conduct behavioral observations. Although the screening process is noteworthy, it
may be difficult for some school districts to implement.

Some program limitations are also noted. For example, the program does not reduce internalizing distress often associated with externalizing problems. In the outcome investigations reviewed, teacher raters were not blind to the children's assignment to treatment. First Step is not designed for children with autism, severe language problems, and families who require intensive interventions and support services. Since this program uses a combined treatment approach, it remains unclear which component of the program contributes to outcomes. Finally, replication studies that include wait-listed control groups are needed.

**Parent Teacher Action Research (PTAR)**

Like First Step, the PTAR Team approach is a prevention program for children at-risk for antisocial behavior patterns in elementary school. However, PTAR is a primary prevention program that provides whole-class social skills instruction and universal screening to all students. Based on 50 years of educational action research, PTAR offers a structure for parents and regular education teachers to work as collaborative partners in identifying goals and designing and implementing action plans (Kay & Fitzgerald, 1997). Participatory action research, a collaborative problem solving process, fosters equal partnerships between parents, teachers, and other professionals. Action research involves defining a problem, gathering and organizing data related to the problem, taking action to address the problem, evaluating data, and then beginning the cycle again as needed (Kay & Fitzgerald, 1997). Action research teams work flexibly together and use understandable language to define goals and action plans.

PTAR allows teachers' choice of social skills curricula and the PTAR team's choice of interventions for an individual child. This flexible approach permits the PTAR team to customize a program around the child's needs. The team includes individuals involved in the child's life at home and school (e.g., regular education teacher, parent(s), parent liaison, and a PTAR staff member).

**Screening**

Similar to First Step, PTAR includes a multi-step screening procedure, the Systematic Screening for Behavior Disorders (SSBD; Walker & Severson, 1990; Severson & Walker, 2002) that includes parents and teachers as informants. For Step One, teachers are given a list of externalizing behaviors (e.g., calls out in class, does not follow directions)

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5 A primary prevention program is defined as one that provides services to all children, not just those who are at-risk for a problem or have a problem.
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and internalizing behaviors (e.g., withdraws, does not talk to peers). Teachers are asked to select children who represent the top five externalizers and five internalizers in their class. Teachers are then asked to rate the children on the SSBD Critical Events Index (CEI) and Combined Frequency Index of Adaptive and Maladaptive Behaviors.

For Step Two, children are matched on whether they are internalizers or externalizers (based on SSBD ratings) and matched by gender (i.e., for research purposes only). In Step Three, parents are invited to participate and asked to complete the Teachers Report Form (TRF: Achenbach, 1991a). In Step Four, TRF Total Problems Scale scores are added to the matching criteria and the children are re-matched on the basis of all three criteria: (a) internalizer vs. externalizer, (b) gender, (c) TRF Total Problem Scale. Rematching is conducted to yield comparable levels of problems among children. For research purposes, children are then randomly assigned to a PTAR team or control group. Parent consent is required before a referral is made to the team. Parent participation is critical for effective team functioning.

Treatment Components

Each PTAR team consists of the child’s regular education teacher, parent(s), a parent liaison who is recruited from the local community to assist low-income families and a facilitator from the Achieving, Behaving, Caring (ABC) project staff (credentials are not specified by authors). Other professionals (e.g., school psychologists, speech/language specialists) are invited to participate in the team as needed. Making Action Plans, an adaptation of the McGill Action Planning System (MAPS: Forest & Pearpoint, 1992), identifies children’s strengths, parents’ hopes for their children, mutual parent-teacher goals, and observable indicators for goals. MAPS helps parents and teachers focus on children’s strengths and adheres to the following rules: (a) parents are encouraged to speak first, (b) individuals can stop speaking at anytime, (c) minutes are taken that represent individual’s own words, and (d) ideas are expressed in positive language. MAPS focuses on the progress of the child, program effectiveness, and program modifications needed for child outcomes. Using this process, the team develops positive academic, social and/or behavioral goals for each child and encourages parent participation.

The facilitator’s role in the first two meetings is to implement MAPS to develop mutual goals, establish objectives of observable indicators for goals, and assist team members in planning their behavioral observations. During subsequent meetings, the PTAR team identifies and agrees on academic, social, and/or behavioral goals for the school year, observable indicators of progress at home and school, and action plans. PTAR teams consult with other professionals (e.g., school
psychologists, learning disability specialists) as needed. The role of the facilitator is to create an agenda based on established goals, summarize previous meetings, encourage parents and teachers to share observations, link observations to goals, assist members to formulate hypotheses about behavior, help members generate action plans for the home and school, summarize action plans, set meetings, and take and distribute notes. The role of the parent liaison between team meetings is to contact parents about observations and action plans, conduct home visits as needed, provide community resources, meet with facilitators biweekly, and maintain and distribute detailed notes. The PTAR team meets once a week (e.g., one hour) for six weeks.

Whole-class social skills instruction is provided approximately 15 to 20 minutes, twice a week from October through May (McConaughy, Kay, & Fitzgerald, 1998). Available social skills programs include: Lion's Quest (Quest International, 1990), Responsive Classroom (Charney, 1992), Second Step (Beland, 1998), Skillstreaming the Elementary School Child (McGinnis & Goldstein, 1984), and Taking Part (Cartledge & Kleefeld, 1991). These social skills programs are theoretically rich and data driven. As outlined by The Social Skills Planning Guide (Alberg, Petry, & Eller, 1994), the social skills curricula target communication, interpersonal, personal, and response skills. Detailed information on each program can be found in the above references.

Outcome Results

Several investigations provide evidence of PTAR's effectiveness. McConaughy, Kay, and Fitzgerald (1998) compared the effectiveness of PTAR versus whole-class social skills training with 36 first-grade children (28 males) at-risk for ED who lived in rural and semi-rural communities. Using an experimental design with a matched control group, results revealed PTAR yielded significant reductions in both externalizing and internalizing problems (i.e., social problems, delinquent behavior, and aggressive behavior) compared to controls. Independent observers rated PTAR children as having reduced hyperactivity in class and reduced aggressive behavior during recess than controls. PTAR teachers reported greater improvements in on-task behavior, social skills, cooperation, assertion and self-control than control teachers.

In a replication study conducted by McConaughy, Kay, and Fitzgerald (1999), 82 first and second graders at-risk for ED were randomly assigned to PTAR or a control group (i.e., received social skills training by teachers). At the end of two-years, PTAR children exhibited significant reductions in teacher reported internalizing problems and delinquent behavior (i.e., the TRF's Withdrawn, Internalizing, and Delinquent Behavior Scales) and parent reported
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externalizing, internalizing, and delinquent behavior (i.e., CBCL's Total Problems, Internalizing, Externalizing, Thought Problems, Withdrawn, Delinquent Behavior and Aggressive Behavior Scales) than the controls. Independent observers rated PTAR children with fewer internalizing problems in the classroom than controls. PTAR parents also reported improvements in children's cooperation, self-control, competence, and ability to access school-based services. The authors attributed their findings to the universal screening process (i.e., SSBD) and active involvement of parents in intervention selection.

McConaughy, Kay, and Fitzgerald (2000) reanalyzed two separate cohorts of PTAR participants (i.e., one-year versus two-year outcome data) to compare the long-term benefits of PTAR. Matched pairs of 82 first and second grade children were randomly assigned to PTAR teams or a control group. Results revealed more main and interaction effects at the end of Year 2 versus Year 1 supporting the overall effectiveness of PTAR and the long-term implementation of PTAR for producing lasting change in children's problems and competencies. For example, results at year one showed reductions in teacher reported internalizing and externalizing behaviors and greater reductions at year two. The authors concluded that PTAR produced greater gains when implemented over the course of two years.

Commentary

PTAR is an effective model for fostering home and school collaboration. Similar to First Step, PTAR can be best described as an indicated prevention program (Pfeiffer & Reddy, 1997). A key feature of both First Step and PTAR is the use of a comprehensive multi-step screening process. However, some schools may find it challenging to implement. PTAR emphasizes and mandates parent involvement. Thus, program implementation is not possible for parents who cannot or will not actively participate in the program. For non-English speaking parents, outreach services (e.g., translators for collaboration and completing questionnaires) are obtained to facilitate the process.

Conclusions drawn from outcome results should be tenuously made because teachers were not blind to the assignment of treatment for children and child samples included a range of problems such as behavior, speech, and social skills issues. Since all children received social skills training, it remains unclear whether outcomes in social skills were attributed to PTAR or other factors (e.g., maturation). Additionally, replication studies that include wait-listed control groups are needed.
Intensive Mental Health Program

In contrast to First Step and PTAR, the Intensive Mental Health Program (IMHP) is an intervention program for elementary school-aged children with ED (Roberts, Jacobs, Puddy, Nyre, & Vernberg, 2003; Vernberg, Roberts, & Nyre, 2002). IMHP is a half-day self-contained classroom program that provides comprehensive school-based psychological, educational, and family services. Services are coordinated and implemented across the self-contained classroom, regular education classroom (i.e., neighborhood school), and home setting.

IMHP is designed to improve the psychological functioning, behavioral control, and academic performance for children with ED. An innovative feature of IMHP is that behavior management strategies are implemented in the self-contained classroom, regular education classroom, and home (Vernberg et al., 2002). Like PTAR, IMHP is tailored to the individual child and includes psychosocial interventions, group and individual therapy, social skills and relaxation training, behavior management programs and the use of medication in the classroom and home.

IMHP is designed to increase access to mental health services, promote interdisciplinary training of psychologists, and evaluate the effectiveness of programs. Other important features of IMHP are the emphasis on placement permanency in the child’s home and regular education classroom; use of empirically supported interventions; development of cognitive and behavior skills; collaboration among professionals, agencies/settings (e.g., school, after-school programs, neighborhood), and stakeholders; generalization and maintenance of behavioral outcomes; child-centered, family-focused, community-based, developmental, and culturally competent services; on-going assessment and diagnosis; and the development of effective parenting strategies (Vernberg, Jacobs, Nyre, Puddy, & Roberts, 2004).

Screening

When children with ED are referred to the program, they are screened on their current psychological functioning, behavior, academic performance, family environment, and prior treatment history. Information is gathered from the school, regular and special education teachers, as well as parents and community providers involved in the children’s care. The Child and Adolescent Functioning Assessment Scale (CAFAS) (Hodges 2000; Hodges, Wong, & Latessa, 1998) is used for the initial intake and discharge from the program. The CAFAS includes a Total Scale, a global measure of the child’s adaptive functioning, three Role Performance Scales that measure the child’s ability to act age-appropriately in important settings (i.e., School,
Home, and Community Scales), and five Psychological Functioning Scales that measure the child's severity of psychological impairment (i.e., Behavior Toward Others, Moods/Emotions, Self-Harmful Behaviors, Substance Use, and Thinking Scales). The CAFAS also includes two Childrearing Environment Scales (i.e., Maternal Needs, Family/Social Support Scales). CAFAS ratings are made after all clinical case materials (e.g., school and home reports, grades, peer relations) are reviewed. The CAFAS has strong reliability and validity indices as an outcome measure in clinical settings (see Hodges, Wong, & Latessa, 1998 for details). All children screened for the program met the federal educational standards outlined in the Individuals with Disabilities Education Act (1997) for ED, exhibited a program-specific standard for critical need (i.e., risk of hospitalization or other out-home care, threat to self, classmates, teachers, or family members, and/or exhibit disorganized and bizarre behaviors), and received less restrictive services prior to IMHP (Vemberg et al., 2004). Approximately, 90% of the children in IMHP received one or more DSM-IV-TR diagnoses such as Learning Disabled, Attention-Deficit/Hyperactivity Disorder (ADHD) or another disruptive behavior disorder such as Oppositional Defiant Disorder and/or Conduct Disorder. Furthermore, these children typically had low Global Assessment of Functioning (GAF) Scale scores ranging from 20 to 50.

Treatment Components

Decisions regarding placement and/or services in IMHP are made by a multidisciplinary team. Screening information (e.g., current academic and behavioral functioning, prior experience in school and treatment) plays an integral role in designing each child's Individualized Education Plan (IEP). The service-delivery team includes special education teachers, paraprofessional teachers, licensed master's-level therapists, licensed doctoral-level clinical psychologists, certified school psychologists, school social workers, research staff, and a child psychiatrist (Vemberg et al., 2002, 2003). IMHP emphasizes a team model that embraces the contributions of all members involved (e.g., parents, psychologists, professional teacher, special education teachers, social workers, and community providers). The program focuses on the involvement and consistent implementation of interventions and services among parents, school staff, medical and psychiatric personnel, community agencies, and therapists.

IMHP children receive: (a) daily specialized academic instruction from a special education teacher, (b) a positive behavioral management system (i.e., token economy system with response cost) in the IMHP school, home, and neighborhood school, (c) individual therapy
(twice weekly), (d) group therapy (four 30 minute sessions per week) plus daily group check-in sessions, and (e) crisis management (Roberts et al., 2003). The program goal is that each child obtains 80% of his/her daily points in the IMHP classroom, home, and neighborhood school.

IMHP is implemented by a multi-disciplinary team. The child-to-staff ratio includes three professionals (e.g., special education teacher, paraprofessional teacher, master’s level therapist) for every six children with support personnel for a half day (i.e., three-hour) self-contained classroom. Two therapists work on alternating days in the classroom in order to participate in supervision, parent and/or consultation meetings, and service coordination. The teaching staff meets weekly to review children’s academic and behavioral progress, problems, treatment planning, discharge planning and new admissions. Master’s-level therapists and social workers are responsible for coordinating interventions and services across agencies, overseeing the behavioral management system and implementing individual and group treatments and crisis management. Therapists are provided two-hours of weekly supervision (Roberts et al., 2003). On average, children are enrolled in IMHP for approximately two years with the majority of children transitioned to their neighborhood school for half of the school day within the first month.

During program implementation, data are gathered continuously on each child. Data collection includes: (a) daily behavior point sheets completed in the home, neighborhood school, bus, and IMHP classroom; (b) daily symptom rating scales of psychological and behavioral symptoms; (c) the CAFAS (Hodges 2000; Hodges, Wong, & Latessa, 1998) three times a year; (d) the Behavioral Assessment Scale for Children (BASC; Reynolds & Kamphaus, 1992) twice a year; (e) the Diagnostic Interview for Children and Adolescents (DICA; Wenzler, Reich, Herjanic, Jung & Amado, 1987) annually; (f) the Parenting Stress Index—III (PSI; Abidin, 1995) annually; (g) the Hope Scales (Snyder et al., 1996, 1997) for adults and children twice per year; and (h) the HOME Scale (Caldwell & Bradley, 1994) twice per year (Vernberg et al., 2004).

Outcome Results

Outcome studies provide support for the efficacy of IMHP. For example, Roberts et al. (2003) conducted a single subject design study with three Caucasian children (two males, mean age 10 years). Two out of three children demonstrated clinical improvements in overall adaptive functioning and severity of Role Performance and Psychological Symptomology as measured by the CAFAS Scales. Additionally,
generalizability of cognitive and behavioral coping strategies learned in therapy was found in two of the three subjects.

Since IMHP's inception, Vernberg et al. (2002) found 41 out of 43 (i.e., 95%) IMHP children attended their neighborhood schools for half of a day within one month of starting the program and the majority met or exceeded their treatment goal (i.e., earn 80% of their points). Results indicated that IMHP is effective in helping children with ED to function in their neighborhood school during treatment. Also, 74% of children discharged from IMHP were enrolled full-time in their neighborhood schools and lived with their biological or adoptive parents.

In a study of 50 children (42 boys, age five to 13 years), results indicated that 84% of the children showed clinically and statistically significant improvements in overall adaptive functioning across settings from intake to discharge as measured by the CAFAS (Vernberg et al., 2004). The sample included 70% Caucasian, 16% African American, 8% Native American, 2% Hispanic, and 4% biracial children. Also, clinically and statistically significant improvements in overall school performance and home behavior, as well as behavior towards others, regulation of moods and emotions, self-harm, and problem solving were found. IMHP children were successfully transitioned to a full day regular education classroom in approximately one year (Nyre, Roberts, Jacobs, Puddy, & Vernberg, 2002). Additionally, IMHP was found to be a cost effective intervention (i.e., $9,000 annually per child) in comparison to other placement options.

Commentary

IMHP, an innovative self-contained program for children with ED, developed out of a collaborative partnership between Lawrence, Kansas Public Schools and the Clinical Child Psychology Program at the University of Kansas. IMHP's success rests on the careful planning and implementation of targeted behavioral interventions across IMHP's self-contained program, neighborhood schools, and homes. IMHP's promotion of mental health services, interagency collaboration, and placement permanency (i.e., home, neighborhood school) offer unique contributions to the field. Although IMHP offers noteworthy findings, the efficacy of IMHP in comparison to treatment alternative or wait-list control groups are needed. Thus, definitive conclusions about the short-term and long-term efficacy of IMHP are premature. Nevertheless, IMHP offers a promising treatment alternative to more restrictive care (i.e., residential treatment, group home) for children with ED.

In the next section, considerations for future school prevention and intervention programs for children with ED are presented and priorities for training school personnel are proposed.
The three programs described illustrate the range of prevention and intervention programs for children at risk for and with ED. Each program has a strong theoretical basis, empirical support, and use of innovative school prevention and intervention approaches. Collectively, these programs offer a glimpse of some of the key treatment ingredients for developing and measuring future school prevention and intervention programs.

Based on the three programs, we recommend that future school prevention and intervention models include: (a) comprehensive outcome assessment approaches that includes multiple domains (i.e., academic, behavior, and social competencies), (b) psychometrically sound and clinically sensitive outcome assessment instruments, (c) the assessment of quantifiable behavioral goals, (d) empirically supported academic and behavioral interventions, (e) well-defined treatment components, (f) intensive skill-based parent and teacher training, (g) home and school contingency management plans, (h) interventions tailored to the developmental level of the child, (i) culturally appropriate interventions that target functional behaviors and competencies in children, parents, and/or teachers, (j) parents and teachers as agents of therapeutic change, (k) varied treatment agents (e.g., regular and special education teachers, teacher aides, parents, school psychologists, social workers), (l) different treatment settings (e.g., regular education classrooms, self-contained classrooms, lunch/recess, after school programs, home, neighborhood, and community agencies), and (m) outcome success defined by statistically and clinically meaningful methods (e.g., effect sizes, Jacobsen and Truax method) (Reddy, 2001; Reddy & Savin, 2000). Additionally, other important program components include intensive case management and the assessment of treatment acceptability and treatment adherence among parents, teachers, and/or other school personnel (Springer & Reddy, 2004).

The efficacy of prevention and intervention programs is based, in part, on the screening and selection of children for the program. In the programs reviewed, the screening process was critically important for ensuring that children at-risk for receiving an ED classification or children with an ED classification obtain appropriate intervention services (e.g., specialized instruction, medication, social skills training, child/parent therapy) tailored to the unique strengths and challenges of the individual child.

The three programs also suggest that the future success of school prevention and intervention programs for children at risk for and with ED lies in the integration of assessment and treatment methods and collaboration among professionals (e.g., teachers, teacher aides,
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school psychologists, clinical psychologists, psychiatrists) and agencies (e.g., education, social services, mental health, juvenile justice) (Pfeiffer & Reddy, 1998; President’s New Freedom Commission, 2003). Advancements in school-based programming can offer significant contributions, however school personnel will not serve as the sole providers in educating and treating children with ED. Thus, a paradigm shift is needed so that school personnel adhere to a collaborative/participatory approach in educating and treating this population with other professionals (e.g., clinical psychologists, psychiatrists). This approach embraces a commitment to flexibility and collaboration across disciplines, creating an atmosphere of mutual respect for the knowledge and contribution of each team member regardless of their background. Soliciting the input and participation of all stakeholders (e.g., parents, teachers, other school personnel, agency providers) is critical for designing and evaluating future prevention and intervention models. The use of surveys (e.g., mail and e-mail distributed), focus groups, and community meetings are examples of ways to solicit stakeholders’ input and participation.

Future models of school prevention and intervention programs will benefit from broadening the scope of treatments in the school, home, and community. We recommend that future models adopt an integrated continuum of services that encompass prevention, intervention, maintenance, and health promotion/wellness programs and services across settings (Reddy, 2001; Pfeiffer & Reddy, 1997; Weist et al., 2003). Health promotion/wellness interventions are designed to enhance overall well-being, resilience, enjoyment, and efficacy in children with ED and their families (Cowen, 1991). The three programs highlighted do not incorporate maintenance and health promotion/wellness interventions. Maintenance interventions and health promotion/wellness interventions are potent yet often overlooked modes of intervention for children with ED (Reddy, 2001). Maintenance interventions, frequently called aftercare services, are designed to sustain educational and behavioral gains achieved during prevention and/or treatment interventions. Moreover, maintenance interventions are designed to prevent relapse for children during stress periods (e.g., new school, change in teachers, relocation to another town/community, parent separation/divorce, death, birth of a new sibling).

Finally, developers of new prevention and intervention programs should attend to ecological factors that influence children’s learning and behavior (Bronfenbrenner, 1979; Hansen et al., 2004). As previously noted, children’s level of social integration in their school, home, and community significantly impact academic and behavioral outcomes in this population (e.g., Armstrong et al., 2003; Duchnowski,
1994; Wagner, 1995). Thus, feelings of belonging, connection, and sense of safety at home and school can profoundly influence the short-term and long-term success among children with ED.

Priorities for Training

School personnel (i.e., school psychologists, social workers, teachers, and administrators) who design, implement, and evaluate new prevention and intervention programs for children at-risk for and with ED require a broad range of competencies and skills. Priorities for school inservice training may include knowledge of developmental psychology (emphasizing normal and atypical developmental factors), neurocognitive processes and pathways of childhood disorders, psychopharmacology interventions, special education and mental health policy and regulations, and empirically supported prevention, treatment, maintenance, and wellness/health promotion interventions for childhood disorders and problems. Also, school personnel warrant intensive parent and teacher training (e.g., behavior management, social skills/self-control, academic skills), skills for effective collaboration with agencies (e.g., school, social service, juvenile justice, and/or primary health care) and professionals (e.g., physicians, nurses, occupational therapists, physical therapists), and skills for child advocacy. It is recommended that teaching staff and child study team members be separately surveyed on their inservice training needs.

Conclusion

Prevention and intervention programs for children at-risk for and with ED offer an effective approach for promoting children's academic, behavioral, and social competencies in the schools. A comprehensive integrated cross-disciplinary approach is advocated for educating and treating this population. Three exemplary school prevention and intervention programs were described that are effective, theoretically driven, and flexible for application in school and community settings. Based on "what works" in the three model programs, considerations for future school prevention and intervention programs were offered. Additionally, priorities for training school personnel were outlined.

References


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