2005

Emotional/Behavioral Disorders: A Retrospective Examination of Social Skills, Linguistics, and Student Outcomes

John W. Hill
University of Nebraska at Omaha, jhill@unomaha.edu

Kathy L. Coufal
Wichita State University, kathy.coufal@wichita.edu

Emotional/Behavioral Disorders:
A Retrospective Examination of Social Skills, Linguistics,
and Student Outcomes

John W.Hill
University of Nebraska at Omaha
Kathy L. Coufal
Wichita State University

A language-based social skills instruction intervention used to prepare middle and high school students with emotional/behavioral disorders for return to less restrictive public school placements was evaluated. The daily 50-minute intervention focused on repetitive readings, recitations, and role-playing of skill step procedures until students achieved mastery on each required task in five broad dimensions: peer relations, self-management, academic, compliance, and assertion. The students were divided into three groups according to the length of intervention (under 2 years, 2 to 3 years, and more than 3 years). Dependent t tests were used to test the effects of prolonged intervention on past year and final year disruptive behavior totals and response to a self-control question for students in each group. In addition, a chi-square was used to evaluate the frequency of students with four or fewer disruptive behaviors across groups to determine progress toward unsupervised transition. Implications for social skills intervention and communication disorders practice are discussed.

Social competence is defined as "the ability to interact successfully with peers and significant adults" (Gresham, Sugai, & Horner, 2001, p. 331). Children not exhibiting appropriate social competence in the context of school, home, or other cultural contexts are often included in programs designed to improve their social skills. Social skills training, however, has not been shown to produce the desired changes in social competence that the programs intend. Gresham et al. report that interpretation of meta-analyses has led to the conclusion that "social skills training has not produced particularly large, socially important, long-term, or generalizable changes in social competence" (p. 332). The weak effects of the training may be a function of the taxonomy used to classify behavior and behavior problems.

As detailed by Gresham and his colleagues (2001), "social skills are behaviors that must be taught, learned, and performed, whereas social competence represents judgments or evaluations of these behaviors within and across situations" (p. 333). Social skills are those behaviors used by an individual to function in social tasks, such as in starting and maintaining conversations, giving and receiving compliments, engaging in play with peers, requesting actions or information, and taking part in other socially relevant activities for the individual's age group. Social competence, in contrast, is defined by significant others within the contexts in which the individual has opportunities for interaction. As such, teachers, parents, siblings, and peers judge whether an individual's behaviors are socially relevant and desirable; that is, that the behaviors are acceptable and functional for the individual to gain peer and adult acceptance, form friendships, and participate successfully in social tasks.

To be socially valid outcomes of social skills instruction (SSI), behaviors need to exist not only in the presence of the teachers or interventionists, but also in the generalized contexts of everyday functioning and in the opinion of those significant others with whom the child interacts. If the SSI program produces only weak effects in the children participating, we must question why this occurred and how it can be modified.

RELATIONSHIPS BETWEEN LANGUAGE ABILITY AND BEHAVIOR PROBLEMS

It has been widely established that poor language ability and emotional/behavioral problems, including psychopathology, psychosocial impairments, and psychiatric disorders, have a close association (Asher & Gazelle, 1999; Baltaxe & Simmons, 1990; Beitchman, Cohen, Konstantareas, & Tannock, 1996; Brinton & Fujiki, 1993, 1999; Brown, 1994; Cantwell & Baker, 1987, 1991; Fujiki, Brinton, Hart, & Fitzgerald, 1999; Gallagher, 1999; Hyter, Rogers-Adkinson, Self, Simmons, & Jantz, 2001). Furthermore, it is generally acknowledged that

concomitant behavior/emotional problems are present and persistent for many children and adolescents with language disorders. The co-morbidity rate has been reported to be as high as 88% in children identified with language deficits and psychiatric problems (Beitchman, 1985; Cantwell & Baker, 1987; Hyter et al., 2001). Baltaxe and Simmons described the communication behaviors of children diagnosed with oppositional–defiant disorders as violating the expected interpersonal and social communication norms. The transactional effect of language and emotional disorders are associated with poor development of mutual regulation and self-regulatory behaviors. Such problems occur in significantly higher incidence in children with language disorders than they do in the general population. As summarized by Brinton and Fujiki (1999), longitudinal studies of children initially identified as exhibiting communication disorders at ages 3 and 5 years, without concomitant symptoms of emotional/behavioral disorders (EBD), later (ages 8 and 12 years) had emotional/behavioral or psychiatric disorders at a higher than typical prevalence rate. According to Baltaxe and Simmons (1990),

> The pervasiveness of disordered communication in psychiatric populations is no longer in doubt. The need for greater awareness in both professions regarding the degree, kind, and significance of the relationship between psychiatric disorders and communication handicaps is obvious, as is the need for and central place of the speech–language specialist in child psychiatric inpatient and outpatient settings. (p. 29)

One component of emotional/behavioral well-being and the complex factors contributing to healthy psychosocial development is the child's ability to form and maintain friendships. A related aspect is the child's acceptance in the culture of his or her peers. Acceptance and friendships have a direct effect on children's self-concept, school performance, and cognitive development (Asher & Gazelle, 1999). Friendships provide opportunities for children to use,

refine, and enhance skills that allow them to interact, negotiate, resolve conflicts, exchange ideas, collaborate, and solve problems. Fujiki et al. (1999) examined eight elementary-age children with specific language impairment (SLI) to determine the profiles of peer acceptance and friendships. They hypothesized that children with SLI, as represented by these eight students, would exhibit poor peer acceptance and few friendships. Although the researchers found surprising variability in the profiles, in general they confirmed that children with SLI had greater difficulty interacting with their peers in school in ways that earned social acceptance and were rarely named as one of three persons other children regarded as friends. According to Fujiki et al., "Of the eight children with SLI, 5 (63%) were not named by any child as a best friend . . . .Across the four classes observed in this study, 15% of the children were not named by anyone as a friend, and almost half of those (5/12) were children with SLI" (p. 44).

In describing the behaviors of the children, Fujiki et al. (1999) reported that children with SLI were observed during recess to play alone, play with younger children, shadow the activities of others without joining the group, or disrupt group play when they attempted to enter into the group. In general, they were described as being on the outskirts of social activity.Because friendships are formed and maintained through interpersonal interactions, largely dependent on language proficiency, children with SLI may find it outside of their ability to engage in self-disclosure, expression of concern or affection, negotiation, and conflict resolution, as well as the conversational mechanisms of using humor, taking turns, interpreting sarcasm, and using other social-exchange tools. As concluded by Fujiki and his colleagues,

> social functioning is an important part of educational programming. Children with SLI struggle with communication and academics, and they need good peer relationships to

> provide support in school settings. Friendships provide an essential context for scaffolding language and interactional skills. (p. 46)

The challenge in promoting the development of social skills is not only in teaching the behavior, but also in creating natural contexts in which the skills can be developed, used, and refined.As discussed by Gresham et al., (2001), the failure of SSI to produce social competence (reflected in acceptance and friendships) may be related to the historical focus on skill acquisition rather than development and internalization of skills that are useful and appropriate across varying contexts. If children fail to develop friendships, which may in part be due to their poor linguistic abilities, they are further compromised in their social–emotional development and school performance. This is further evidence that the communicative
abilities of all children need to be considered holistically, and with "an ear to the future," to be alert to potential problems with the social, emotional, and behavioral development of every child.

Brinton and Fujiki (1999), in their study of six children with SLI (ages 8 years 10 months to 12 years 5 months), concluded,

> Many children with SLI . . . will show internalizing behaviors and operate on the edge of social groups. Some, however, . . . may also show externalizing behaviors and appear disruptive in classroom and social settings . . . . As with all aspects of language intervention, specific treatment targets, and procedures must be tailored to fit individual profiles. (pp. 67–68)

The difficulty in selecting targets for intervention is that the problems are not easily identified; therefore, isolating specific service needs is difficult. The linguistic profiles of individual children must be examined in comparison with their behavior profiles to determine the ramifications of the linguistic deficits, targets for intervention, and intervention techniques and

contexts. Furthermore, the efficacy of any intervention must be considered in the contexts of social competence as well as specific skill development. The implication of these studies is that it is not enough to conclude a child does or does not exhibit language impairment or an emotional/behavioral problem and assume such diagnosis leads to prescriptive intervention. This implies a morbidity model associated with a medical–diagnostic taxonomy. Rather, the specific aspects of a child's communication and behavior must be examined to determine the interrelationships among particular abilities across developmental domains and the reciprocity/transactional effect when one domain is not fully developed or is deviant from the typical pattern.

THE DECALAGE OF LANGUAGE, COGNITION, AND BEHAVIOR

The term *decalage* is used by Siegel (1996) in the Piagetian sense to refer to a

> coming together of heterogeneously staged abilities from different domains of development that together represents developmental functions that cannot be wholly characterized as fitting one stage of development or another. (p. 52)

Behavior change, like communication and cognition, must be considered from a developmental/maturational perspective rather than from a medical–prescriptive perspective. Therefore, development is best viewed ontogenetically. Communication, cognition, and the social–emotional domains are inextricably related, reflecting ongoing maturation in a successively more integrated, upward direction, progressing toward intrapersonal relations that are judged effective and age appropriate. Behavior is the outward manifestation of a developmental process, whereas morbidity is an organic, downward, successively less well-integrated, intraorganismic devolution, comparing the premorbid to the morbid state (Siegel).

The morbidity model portrays a black-and-white profile, ignoring the developmental processes and focusing only on the presence or absence of symptoms that constitute a diagnosis of a disorder (e.g., the child manifests the full symptomatic profile of attention-deficit/hyperactivity disorder [ADHD], or does not). Such a model ignores the developmental/maturational aspects of an evolving condition, the continuum of severity and frequency of behaviors, the context in which behaviors do or do not occur, and the interrelationships among developing domains.

The medical model is inappropriately utilized when considering the ontogeny of childhood development and may result in under identification of children. Children not exhibiting the full manifestation of symptoms that lead to diagnosis of a problem, such as communicative, cognitive, or behavioral impairment, might benefit from services designed to prevent a disorder or the further confounding of the ontogenesis of development in other domains. As reported in the studies of communication and language co-morbidity, however, the majority of children presenting with early communication disorders were not identified as having EBD, though in later years were diagnosed with psychopathologies. The research reports have repeatedly cautioned practitioners that there is a high probability that early language disorders may be associated with later behavior disorders and poor academic performance.

As noted by Hyter et al. (2001) and Sanger,Moore-Brown, Magnuson, and Svoboda (2001), among others, school-based speech–language pathologists (SLPs) have a history of underidentifying communication disorders in students with EBD. This may be due to the complex interrelationships among the developing domains, with the problem behaviors potentially obscuring the communication or cognitive deficits. Alternatively, it may be that the nature of the communication deficit is not sufficiently identified in the early years, such as is reportedly the case with pragmatic deficits (Hyter et al.). As noted by Westby (1998), among

others, linguistic, social, cognitive, and emotional skills are connected through pragmatics and reflected in the speaker's pragmatic ability. Tests of communication, however, typically focus on semantics, syntax, morphology, and phonology, as these are the performance areas in which specific skill development can be most objectively measured. Like social competence, pragmatic competence is largely a function of the context of the interaction and the judgment of the social partner, and therefore is largely a subjective measurement area. This should not preclude assessment, but requires a different assessment process and taxonomy. The SLP must consider the ontogenesis and decalage of the developmental domains, as well as the contexts in which the individual child is expected to function. As discussed by Siegel (1996),

> in developmental neuropsychiatry, "maturational change" and "morbidity of the disease process" are basically seen as separate, coexisting phenomena, rather than as interdependent phenomena, even though both are seen as neurobiologically driven, and proceeding simultaneously. (p. 42)

Siegel notes that a more appropriate and necessary concept of atypical ontogeny is to view maturational change and morbidity as interdependent phenomena. Children are not born with a full complement of symptoms that characterize later as discrete disorders.

> Instead, neurodevelopmental symptoms in children metamorphize over time, and in predictable ways that can be characterized by examining how functional aspects of developmental processes interacts during both pre-morbid and clinical stages of a neurodevelopmental disorder. (Siegel, 1996, p. 42)

A lack of social competence is probably the one area of dysfunction that most uniformly describes students with EBD (Maag & Katsiyannis, 1999) and other students demonstrating significant academic, cognitive, and emotional/behavioral deficits, including specific learning

disabilities, mental retardation, emotional disturbance, and ADHD (Gresham & Mac-Millan, 1997). Dropping out of school, juvenile and adult crime, and childhood and adult psychopathology (Parker & Asher, 1987) are all associated with poor interpersonal relationships. Difficulty with communication competence or pragmatics experienced by students with EBD puts them at increased risk for a lifetime of social–emotional problems and diminished success in school (Gallagher, 1999).

Focusing on pragmatic variations in communication through formal evaluation procedures, Bishop and Baird (2001) found that children with ADHD showed evidence of underlying difficulties in social understanding. Compared to descriptions of Asperger syndrome and Pervasive Developmental Disorder–Not Otherwise Specified (American Psychiatric Association, 1987), children with ADHD resembled children in these other diagnostic categories on scales assessing stereotypical language, rapport, and social relationships. Furthermore, according to Children with Attention-Deficit Disorders (CH.A.DD; Fowler, Barkley, Reeve, & Zentall, 1990) 60% of youth identified with the behavioral disorder ADHD, hyperactive-impulsive dimension, may later be identified with oppositional defiant disorder (ODD) or conduct disorder (CD).

Students with EBD, presenting early in life with pragmatic impairments, create communication difficulties not only for themselves but also for others who attempt everyday communication with them. According to Marder and Cox (1991), youths with EBD were reported by parents as beginning to have trouble with their disabilities during grade-school years. Studying developmental “pathways” in boys’ disruptive and delinquent behavior, Kelley, Loeber, Keenan, and DeLamatre (1997) discuss age of onset sequences. Longitudinal analysis of aggression and conduct problems confirms that 3-year-old boys determined to be stubborn were

observed producing minor covert behavior and defiance by age 7, aggression by age 8, and property damage by age 9. Following along this pathway, 11-year-old boys began engaging in moderate to serious delinquency, authority avoidance, fighting, and violence.

Intervention goals for students with EBD include (a) controlling behavioral excesses, such as noncompliance and aggression; (b) remediating academic skill deficits; (c) remediating social skill deficits; (d) teaching internal guides to behavior replacement; and (e) preventing crime (Jones, Downing, Latkowski, Ferre, & McMahon, 1992; Sherman et al., 1997).

PRAGMATICS AND SOCIAL SKILLS DEVELOPMENT

Establishing and maintaining relationships, friendships, peer acceptance, and terminating destructive or injurious relationships defines social competence and adjustment (Kupersmidt, Coie, & Dodge, 1990; Parker & Asher, 1987). Social skills are behaviors that a student uses to perform competently and successfully on social tasks, such as joining in, giving a compliment, or expressing feelings (Gresham et al., 2001). Pragmatics encompasses assumptions about the use of language to express one's intentions and get things done in the world of communication (MacKay & Anderson, 2000)—another way to say social competence and social skills development.

Research on the development of pragmatics throughout the preschool years suggests that during this period children become more aware of social settings and interactions. They learn to relate personal experiences and effectively communicate their wants and needs. Other developing skills include taking turns, maintaining a topic, and providing the listener with relevant information, all of which increase the smooth flow of conversation (Bernstein & Levey, 2002).

School-age children (6 to 12 years) continue to develop pragmatic competence. Research at this age level indicates that children increase their conversational skills by learning to gain and hold adults' attention in a socially acceptable manner. Children at this age level also learn such crucial skills as how to negotiate conflict, understand jokes and sarcasm, express forms of politeness, receive and give affection, and recognize hostility, anger, and pride (Bernstein & Levey, 2002; Olswang, Coggins, & Timler, 2001).

During adolescence, peer communication becomes a regular occurrence and an important source of information, emotional support, and personal well-being (Goldstein & Morgan, 2002; Nippold, 2000).

Although students with severe pragmatic skill deficits will be identified with EBD or autism/Asperger syndrome, children who present with similar or overlapping but less severe symptoms might be identified with Semantic–Pragmatic Language Disorder (SPLD; Letts & Leinonen, 2000) or Pragmatic Language Disorder (PLD; Adams, 2001). Overall, this pattern of diagnostic criteria supports the view of continuity between pervasive and specific developmental disorders (Bishop & Baird, 2001).

METHOD

The purpose of this study was to evaluate a long-standing social skills instruction intervention program delivered to students with EBD to determine the overall effects. This study addresses the following general question: Does prolonged participation in language-based role-play and social skills building activities improve the disruptive behavior, perceived self-control, and transition status of middle and high school students with EBD?

Setting

The data were collected at Alpha School, a comprehensive daytreatment program that has provided mental health and education services for violent and aggressive students from urban and surrounding communities for more than 20 years in Omaha, Nebraska. This intensive, community-based program is for troubled youth, 5 through 21 years of age, who have not responded to positive behavioral supports and intervention programs in public school treatment settings and who otherwise would be placed in more restrictive juvenile detention facilities.

The school program is outcome-based and accredited. The school enrolls 70 youths each school year. A transition program facilitates the youths' return to public school at the end of their program. At the time of data collection, the program was staffed by 3 administrators and 13 teachers. Five educational program specialists served as time-out crisis intervention staff. Five teachers were nonWhite. Finally, the director and teachers of Alpha School were invested in SSI and the evaluation of the intervention. The first author was a consultant to Alpha School during this time.

Intervention

Socially important outcomes, those that make a difference in terms of individual functioning and age-appropriate expectations, include school adjustment (Gresham & MacMillan, 1997; Walker, Irwin, Noell, & Singer, 1992), parent and teacher acceptance (Gresham, 1992; Merrell, 1993; Walker & McConnell, 1995), and peer acceptance and friendship (Newcomb, Bukowski, & Pattee, 1993). SSI intervention is used to remediate deficits in social competence functioning. Social skills are taught, learned, and performed (Gresham et al., 2001) taking into account the broad dimensions of socially important outcomes, including (a) peer relations skills, (b) self-management skills, (c) academic skills, (d) compliance skills, and

(e) assertion skills (Caldarella & Merrell, 1997). Published SSI intervention programs (Elias & Clabby, 1992; Elliott & Gresham, 1992; Goldstein, 1988; Goldstein, Glick, & Gibbs, 1998; Goldstein & McGinnis, 1997) serve as models for intervention. In this study, the SSI intervention utilized was based primarily on the "skillstreaming" strategy developed by Goldstein and McGinnis (1997). Using language-based activities, SSI intervention replaces aggressive behaviors with socially desirable assertive verbal behaviors and self-talk. Participation required students to (a) read and memorize skills, (b) define skills, (c) model skills, (d) participate in and conduct role-play activities, (e) provide and receive feedback, and (f) complete SSI skill homework. Throughout their programs, students were prompted by their teachers to use their social skills as an assertive alternative to aggression and violence.

Social Skills Instruction

The students' SSI handbook was used to verify social skills domains and sentences. Forty-five skills were listed in five domain areas representing the source of students' SSI intervention program. Students learned 20 self-management domain skills, eight assertion domain skills, six peer-relations domain skills, six compliance domain skills, and five academic domain skills. All the skills required students to learn steps framed as simple sentences that feature such state and action verbs as "stop" and "think."

The initial purpose of the investigation was to determine the impact of the social skills program on students' progress and perceptions of their performance as related to transition into a mainstream setting. Retrospectively, questions were asked relative to explanation of the effects. Specifically, the investigators questioned the linguistic and cognitive assumptions underlying the SSI tasks, specifically questioning the developmental appropriateness of the tasks relative to the intelligence and ages of the participants.

One linguistic skill inherent in each of the language-based tasks mandated in the SSI program was the need to understand and use state verbs. Six state verbs were used 78 times in the initial social skills instruction recitation and role-play steps. State verbs and frequencies were (a) “decide” used 41 times (53%), (b) “think” used 29 times (37%), (c) “remember” used three times (3%), (d) “is” used three times (3%), (e) “be” used once (2%), and (f) “realize” used once (2%; see Table 1).

Action verbs, which are developmentally easier, were also inherent in the SSI tasks. The top six action verbs, which were used 75 times in the initial social skills instruction recitation and role-play steps, made up only 58% of the action verb total (129). The most frequently used action verbs were (a) “say” used 27 times (21%), (b) “ask” used 17 times (13%), (c) “act” used 12 times (9%), (d) “stop” used seven times (5%), (e) “choose” used seven times (5%), and (f) “listen” used five times (4%). Twenty-nine other action verbs were used four or fewer times (see Table 1). Sample social skills sentences are found in Table 2.

Participants

The 23 participants ranged in age from 11 years 8 months to 17 years 7 months at the time of program completion. Their full-scale intellectual ability ranged from a low Standard Score (SS) of 81 to a high of 118. The participants were predominately male (96%), disproportionately non-White (26%), and disproportionately eligible for free or reduced pricelunch (50%; see Table 3). This profile for gender, race, and socioeconomic status is congruent with studies examining the demographics of individuals identified as EBD (Wagner, 1995) and remains a concern to be addressed by further research.

All participants were identified as EBD by their referring school districts. According to the Individuals with Disabilities Education Act (IDEA) Amendments of 1997, youths with emotional disturbance are those

> exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance. . . . an inability to learn that cannot be explained by intellectual, sensory, or health factors; an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; inappropriate types of behaviors or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; and/or a tendency to develop physical symptoms or fears associated with personal or school problems. (34 CFR 300.7(4) (i)(A-E))

The participants also had psychiatric diagnoses at the time of day-treatment placement. Fifteen were identified with ODD (66%). Other participants were identified with ADHD (n = 5, 22%), conduct disorder (n = 1, 4%), reactive attachment disorder of early childhood (n = 1, 4%), and bipolar disorder (n = 1, 4%). Reasons for referral to the day-treatment school program included an ongoing history of school failure, "acting out," noncompliance, physical aggression, extreme self-injurious behavior, and violence.

For analysis, students were grouped according to the amount of time they received the program intervention. The students who received intervention and completed all social skills instruction in less than 2 years (months of intervention M = 16.44, SD = 1.42) were placed in Group 1 (n = 9). Students in Group 2 (n = 7) completed their intervention program in 2 to 3 years (months of intervention M= 27.86, SD = 4.53), and Group 3 students' (n = 7) intervention continued for more than 3 years (months of intervention M= 47.71, SD = 7.85). Students' Full

Scale Intelligence Standard Scores were congruent across groups (Group 1, M = 99.78, SD = 6.55; Group 2, M = 98.43, SD = 14.35; Group 3, M = 91.86, SD = 10.46). Furthermore, students were closely matched for age at completion (Group 1,M= 15.89, SD = 0.80; Group 2,M= 14.90, SD = 2.41; Group 3,M= 15.63, SD = 1.64) and grade at completion (Group 1, M = 9.44, SD = 1.13; Group 2, M = 8.57, SD = 2.23; Group 3, M = 9.57, SD = 1.40). No study participants had ever been eligible for or received speech-language-hearing services.

Design

The research design selected was an ex post facto three-group survey design to determine potential changes over time in the measurement of the dependent variable, disruptive behavior, using the past year and final year totals for a pretest–posttest comparison. Students' responses to the self-control question, "Your ability to tell yourself to stay out of trouble all by yourself . . . in the past was/now is," were indicated on a Likert scale. The survey was presented as a postprogram selfassessment, asking the students to reflect on their ability at the time of entering the program and at present, having completed the program. Each group of students received the identical SSI but had differing periods before completing their programs. We also evaluated the number of students with four or fewer disruptive behaviors and the number of students with five or more disruptive behaviors in each group to determine the effect of social skills intervention time on the preparation of students for transition back to less restrictive public school placements. Four or fewer total disruptive behaviors represented the decision point for unsupervised transition and five or more disruptive behaviors represented the decision point for required supervised transition.

TABLE 1. Social Skills Instruction State and Action Verbs

Verbs	Frequency	%
State		
Decide	41	53
Think	29	37
Remember	3	3
Is	3	3
Be	1	2
Realize	1	2
Total	78	100
Action		
Say	27	21
Ask	17	14
Act	12	9
Stop	7	5
Choose	7	5
Listen	5	4
Othersa	54	42
Total	129	100

[a]Action verbs used four or fewer times in alphabetical order: Apologize, Avoid, Carry, Continue, Count,Explain, Follow, Gather, Get, Give,Help, Leave, Look,Make, Name, Offer, Pick, Raise, Recheck, Reward, Suggest, Take, Talk, Tell, Thank, Try,
Wait,Walk,Write.

We used behavior performance data as a measure of progress toward habilitation goals important to individualized youth transition planning. Students' disruptive behavior frequencies for (a) violence toward staff, (b) violence toward students, (c) verbal and physical threats toward staff, (d) verbal and physical threats toward students, and (e) destruction of property, which resulted in the administration of a timeout procedure, were analyzed. We also examined year-end disruptive behavior frequency totals for 2 school years, pretest and posttest. Points for desirable behaviors and disruptive behaviors were awarded on a variable schedule every 15 minutes (VI-15) throughout the school day, 9:00 a.m. to 2:30 p.m. Menus of disruptive behaviors ranged from potentially dangerous behaviors, such as hitting, arguing, and destroying property, to nuisance behaviors, including talking out, wasting materials, and working too slowly. Students' regularly assigned classroom teachers and school staff collected study data as routine standards of care throughout the school year. All disruptive behaviors resulting in the administration of a time-out procedure were entered into the school's computerized behavior-data management system.

TABLE 2. Dimensions and Sample Social Skills Instruction Sentences

	Verb sentence	
Dimension/Skill	State	Action
Academic/Contributing to discussions	Decide exactly what you want to say.	Raise your hand.
Compliance/Accepting "no"	Think about your choices.	Say how you feel in a friendly way.
Assertion/Apologizing	Realize that you need to apologize for something you did.	Write the person a note.
Peer relations/Playing a game	Remember to wait your turn.	When the game is over, say something nice to the other person.
Self-management/Dealing with fear	Decide if you are feeling afraid.	Talk to someone about it.

Student Questions

Students were asked to respond to questions about their behavior performance. Two behavior questions were asked: “Your ability to tell yourself to stay out of trouble all by yourself in the PAST was” and “Your ability to tell yourself to stay out of trouble all by yourself NOW is.”We asked this question “tell yourself to stay out of trouble all by yourself” as a self-control question rather than a simple behavior improvement question because we wanted to determine the ability of students to monitor and manage their own behavior all by themselves, implying the absence of direct teacher or parent supervision. This social survival skill is critically important during the teen years as youth spend increasing time unsupervised by adults (Capaldi & Patterson, 1996). Furthermore, in contemporary interpretations of knowing structures, concept acquisition is viewed as developing through youths’ dialogue (action and reflection) with their own thoughts and the daily give and take of their sociocultural world at school, home, and play (Gee, 1997). The notions of anticipation and reflection continue to play an important role in constructivist interpretations of youthful concept formation. Students answered thequestions using a forced choice Likert scale (1 = very poor, 2 = poor, 3 = good, 4 = very good). Following approval by the school director and review by the institutional review board,data for those students who successfully completed their final school year of social skills instruction and were eligible to begin transition planning were de-identified, arrayed, statistically analyzed, and reported.

Procedures

The intervention was delivered 5 days per week. Each school day one 50-minute class period was devoted to SSI skill building.

The daily 50-minute intervention focused on repetitivereadings of skill steps, copying skill steps onto skill cards for recitation, and role-playing skill step procedures until students achieved mastery on each required task in five broad dimensions (peer relations, self-management, academic, compliance, and assertion; Caldarella & Merrell, 1997). Students read aloud or silently from their handbooks. Students also copied skill steps onto skill cards used to help them remember and recite the skill steps to staff. Also during this class period students learned role-playing procedures and were prompted in their skill usage during role plays. Initially, all students received the most basic SSI intervention steps in a sequential (stepwise) order before proceeding at their own pace through the skill levels. As students advanced, they were asked to assume different roles to play, such as a teacher or another student.

Students were required to learn the SSI skills and use them to regulate their day-to-day behavior to complete their school program and be eligible for transition. Following incidences of disruptive behavior (see Table 4) resulting in administration of a time-out procedure, students were required to write skills they could have used as alternatives to violence and aggression on a problem-solving sheet before returning to class. All staff received SSI and role-play training and support. One staff member was assigned a SSI leadership role, providing in-class support to teachers and students on a rotating basis.

ANALYSIS OF DATA

At the end of their final year of intervention, the students' past year and final year disruptive behavior totals were determined using the available computerized behavior-data management system. Only those disruptive behaviors resulting in administration of a time-out procedure were counted. To test the effectiveness of time in SSI, as indicated by occurrence of disruptive behavior, the past year and final year disruptive behavior totals were compared for all

three groups. A negative difference in the two behavioral measures, indicating a decrease in disruptive behavior incidents, reflects student progress. Also “In the past was” and “Now is” responses to the self-control questionnaire were compared to ascertain the effectiveness of differing lengths of SSI intervention on this dependent measure. Students read and marked their own questionnaires after a staff member asked students to respond to these items in one-to-one meetings. A positive difference in the two self-control responses reflects students’ perceived progress. A third analysis was conducted using the final year disruptive behavior total to evaluate the effects of the intervention on the students’ transition status. Four or fewer disruptive behaviors during the final year of intervention reflect readiness for unsupervised transition status.

The first two hypotheses were tested using the dependent *t* test. The results of the dependent *t* tests are displayed in Tables 5 and 6. The third hypothesis was tested using a chi square. The results are displayed in Table 7. As seen in Table 5, the hypothesis for Group 3 was rejected, indicating that the intervention was statistically significant for the condition of more than 3 years of intervention for reducing disruptive behavior totals. In Table 6, the hypothesis for all groups was rejected, indicating that the intervention was statistically significant for each group for students’ perceived positive self-control change. The result of the chi-square test, displayed in Table 7, was statistically different so we reject the hypothesis of no difference or congruence for transition status. Inspecting our frequency and percent findings in Table 7, we find that the number of Group 1 (less than 2 years of intervention) students with four or fewer final yeardisruptive behaviors (n = 7) indicates a higher incidence of readiness for unsupervised transition (59%) compared to Group 2 (2 to 3 years of intervention; n = 1, 8%) and Group 3 (more than 3 years of intervention; n = 4, 33%).

TABLE 3. Demographic Data of Individual Students in Each Group

Participant	Gender	Ethnicity	DSM-IV classification	Months of intervention	IQ	Age (years)	Grade
Group 1 (Less than 2 years of intervention)							
1	Male	White	ODD	14	92	15.8	8
2	Male	White	ODD	14	103	16.6	10
3	Male	White	ODD	17	98	15.8	10
4	Male	White	ODD	17	109	14.8	8
5	Male	Black	ODD	17	106	15.5	10
6	Male	White	ODD	17	91	16.3	10
7	Male	White	ODD	17	102	17.4	11
8	Male	White	CD	17	93	15.8	10
9	Male	White	ADHD	18	104	15.0	8
Group 2 (2 to 3 years of intervention)							
1	Female	Black	ODD	24	81	17.7	10
2	Male	Black	ADHD	24	99	14.4	9
3	Male	White	ODD	24	106	17.9	11
4	Male	White	RAD of EC	27	81	12.1	5
5	Male	White	ODD	29	93	14.9	9
6	Male	White	Bipolar	31	111	11.8	6
7	Male	White	ODD	36	118	15.5	10
Group 3 (more than 3 years of intervention)							
1	Male	White	ADHD	40	81	12.7	7
2	Male	Latino	ODD	41	91	15.0	10
3	Male	White	ADHD	42	109	15.8	9
4	Male	White	ADHD	48	81	17.5	11
5	Male	Black	ODD	48	87	17.5	11
6	Male	White	ODD	53	102	15.3	10

7	Male	Black	ODD	62	92	15.6	9

Note. DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (American Psychiatric Association, 1994); ODD = oppositional defiant disorder; CD = conduct disorder; ADHD = attention-deficit/hyperactivity disorder; Bipolar = bipolar disorder–not otherwise specified;RAD of EC = reactive attachment disorder of early childhood.

Overall, these findings indicate that Group 3 students made significant disruptive behavior progress over the last year of intervention, but the other two groups did not. The findings also indicate statistically significant perceived self-control change responses across all group conditions. Finally, students in the intervention for the shortest period of time, Group 1, were disproportionately prepared for unsupervised transition back to less restrictive public school placements.

TABLE 4. Disruptive Behavior Frequency and Perceived Self-Control Question Data for Individual Students in Each Group

	Disruptive behavior frequency[b]			**Perceived self-control[c]**		
Participant[a]	Past year	Final year	Difference	In the past was	Now is	Difference
Group 1 (Less than 2 years of intervention)						
1	3	1	−2	1	3	+2
2	0	3	+3	1	3	+2
3	0	0	0	1	4	+3
4	0	0	0	2	3	+1
5	10	1	−9	1	4	+3
6	4	3	−1	1	3	+2
7	4	5	+1	1	3	+2
8	4	10	+6	2	3	+1
9	5	0	−5	1	2	+1
Group 2 (2 to 3 years of intervention)						
1	5	5	0	1	3	+2
2	0	7	+7	2	4	+2
3	3	8	+5	3	4	+1

4	29	28	−1	1	3	+2
5	3	0	−3	1	3	+2
6	4	6	+2	1	3	+2
7	8	5	−3	2	3	+1
Group 3 (More than 3 years of intervention)						
1	13	4	−9	3	4	+1
2	5	1	−4	1	3	+2
3	21	7	−14	1	3	+2
4	1	0	−1	2	3	+1
5	5	2	−3	1	3	+2
6	13	8	−5	2	3	+1
7	22	18	−4	1	3	+2

[a]Participant numbers correspond with Table 3. [b]Negative result is in the direction of improvement. [c]Students ranked themselves on the statements"Your ability to tell yourself to stay out of trouble all by yourself in the past was" and "Your ability to tell yourself to stay out of trouble all by yourself now is" using a 4-point Likert scale (1 = very poor, 2 = poor, 3 = good, 4 = very good).

DISCUSSION

Disruptive behavior change totals were in the direction of improvement for Group 1 (−0.89, ns) and Group 3 (−5.72, $p < .006$) during the final year of SSI intervention. The disruptive behavior change total worsened for Group 2 (1.00, ns) during the final year of intervention. Group 1 students' past year disruptive behavior total was the lowest (3.33), followed by Group 2 (7.43), and Group 3 (11.43). Group 1 also had the lowest final year disruptive behavior total (2.56), followed by Group 3 (5.71) and Group 2 (8.43).

All groups reported substantial mean differences in their ability to tell themselves to stay out of trouble, Group 1 (1.89, $p < .000$), Group 2 (1.72, $p < .000$), and Group 3 (1.57, $p < .000$). These difference scores reflect students' realistic responses to the "in the past was" question,

TABLE 5. Effects of Social Skills Intervention Based on Students' Past Year and Final Year Disruptive Behaviors

		Disruptive behavior totals							
		Past year		**Final year**					
Group	**n**	**M**	**SD**	**M**	**SD**	**Mean change**	**Effect size**	**t**	**p**
1	9	3.33	3.20	2.56	3.28	−0.89	0.23	−0.53	ns
2	7	7.43	9.81	8.43	9.00	1.00	0.10	0.68	ns
3	7	11.43	8.16	5.71	6.18	−5.72	0.79	−3.44	.006

Note. Group 1 participants received the intervention for less than 2 years; Group 2 participants received the intervention for 2 to 3 years; Group 3 participants received the intervention for more than 3 years. A negative t-test result is in the direction of improvement.

TABLE 6. Effects of Social Skills Intervention Based on Students' Perceived Self-Control

		Perceived self-control[a]							
		In the past was		**Now is**					
Group	**n**	**M**	**SD**	**M**	**SD**	**Mean change**	**Effect size**	**t**	**p**
1	9	1.22	0.44	3.11	0.60	1.89	3.63	7.24	.000
2	7	1.57	0.79	3.29	0.49	1.72	2.68	9.29	.000
3	7	1.57	0.79	3.14	0.38	1.57	2.70	7.77	.000

Note. Group 1 participants received the intervention for less than 2 years; Group 2 participants received the intervention for 2 to 3 years; Group 3 participants received the intervention for more than 3 years.

[a]Students ranked themselves on the statements "Your ability to tell yourself to stay out of trouble all by yourself in the past was" and "Your ability to tell yourself to stay out of trouble all by yourself now is" using a 4-point Likert scale (1 = *very poor*, 2 = *poor*, 3 = *good*, 4 = *very good*).

where Group 1 students were the most critical of their past abilities (1.22, very poor), followed by both Group 2 and Group 3 (both 1.57, very poor). In response to the "now is" question, all students (23) were more optimistic in rating their ability to stay out of trouble; Group 2 students (3.29, good) were the most positive, followed by Group 3 (3.14, good) and Group 1 (3.11, good). Interestingly, these ratings were not substantiated by the recorded data, indicating Group 1 actually had the fewest number of disruptive behavior incidents, followed by Group 2 and then Group 3.

Students' inflated perceptions of behavior improvement were interpreted as indicating developing student use of optimistic private speech developed through social skills instruction and interaction. The function of private speech is not language exploration but rather behavioral self-guidance (Vygotsky, 1962; Wertsch, 1985). Theoretically, an individual's cognitive skills develop first in social interaction and then later are internalized (Hoff, 2001). Also according to this view, private speech is an intermediary stage where self-talk will eventually be followed by true internalized self-regulation. Crucial to this development then is the talk that adults provide children to guide them; this in turn produces the child's self-talk, which is ultimately internalized and guides behavior. Although students' positively held unanimous belief that their self-control had improved during the course of SSI intervention was inflated, and therefore incongruent, their belief must be viewed favorably as perhaps representing the positive private speech that is the precursor to later positive public deportment.

The consistency between the number of recorded incidents of disruptive behavior and the self-evaluation data for Group 1 is important. These data are interpreted to suggest that students in Group 1 not only learned appropriate social skills but, as Gresham et al. (2001) have

explained, but also exhibited developing social competence. Unlike Groups 2 and 3, students in Group 1 were more realistic in their judgments and valuations of behavior across situations.

TABLE 7. Effects of Social Skills Intervention Based on Students' Transition Status

	Transition status					
	Unsupervised[a]		Supervised[b]			
Group	n	%	n	%	df	$\chi 2$
1	7	59	2	18		
2	1	8	6	55		
3	4	33	3	27		
Total	12		11		2	7.01*

Note. Group 1 participants received the intervention for less than 2 years; Group 2 participants received the intervention for 2 to 3 years; Group 3 participants received the intervention for more than 3 years.
[a]Students had four or fewer disruptive behaviors in their final year of intervention. [b]Students had five or more disruptive behaviors in their final year of intervention.
*$p < .05$ for Observed verses Expected cell frequencies with a tabled value = 5.991 for $p < .05$.

All groups had students prepared for unsupervised transition: Group 1, n = 7; Group 2, n = 1; and Group 3, n = 4. The Group 1 total, however, represents 59% of the overall students considered prepared for unsupervised transition, followed by Group 3 (33%) and Group 2 (8%). All the groups also had students not prepared for unsupervised transition: Group 1, n = 2; Group 2, n = 6; and Group 3, n = 3. The Group 2 total represents 55% of the total number of students considered not prepared for unsupervised transition, followed by Group 3 (27%) and Group 1 (18%). More than any other variable, severely disruptive behavior has the greatest likelihood of

resulting in a student being excluded from regular classroom activities and therefore, in our experience, represents the single most compelling indicator of anticipated transition struggle or success. Fewer severely disruptive behaviors reflect internal control and positive decision making consistent with self-evaluation, self-control, and prosocial personal growth skill development (Cosden, Gannon, & Haring, 1995; Kern et al., 1995).

In our study, prolonged participation in language-based role-play and social skills building activities did not result in appreciably greater outcomes for students who took longer to complete their intervention. Students in Group 1, with under 2 years of intervention, had the fewest final year disruptive behaviors, perceived their self-control as improved compared to their perception of "in the past was" responses, and had the highest frequency of students prepared for unsupervised transition. Students in Group 2, with 2 to 3 years of intervention, had the greatest number of final year disruptive behaviors and perceived their self-control as improved compared to their perception of "in the past was" responses, but they had the lowest frequency of students prepared for unsupervised transition. Students in Group 3, with more than 3 years of intervention, had the second greatest number of final year disruptive behaviors, also perceived their self-control as improved compared to their perception of "in the past was" responses, and had the second highest frequency of students prepared for unsupervised transition.

The design of this study has several strong features including (a) good intervention stability, (b) long-term intervention use, and (c) staff training and experience. Some limitations are also important to note. First, the effectiveness of SSI intervention cannot be separated from other program intervention constants, including the use of positive reinforcement (Jones, Mandler-Provin, Latkowski, & McMahon, 1987), shaping and fading (Bauer, Shea, & Keppler, 1986), and participation in a token economy (Algozzine, 1990). Behavioral expectations and

rewards changed as students' demonstrated progress. Furthermore, students who progressed through the intervention program had more privileges while receiving fewer external rewards in increasingly less restrictive classroom activities (Smith & Farrell, 1993). Thus, some of the effects achieved in this study could be due to the use of the SSI in combination with the behavioral program.

Second, although students were all verified as having EBD with similar reasons for referral, we did not determine the following before intervention: (a) what social skills a student may or may not have developed adequately in other programs, (b) what social skills a student has developed but may not demonstrate with enough frequency or accuracy, or (c) what social skills a student may have but has not sufficiently internalized such that the skill exists as an inter- and intrapersonal ability that is generalized. Gresham et al. (2001) define these three deficit areas as acquisition deficits (can't do), performance deficits (won't do), and fluency deficits (knows how and wants to perform a particular skill but is awkward or unpolished). Our results for Group 1 could thus reflect an enrollment bias of students who responded positively because their acquisition deficits were fluency deficits at the outset. The SSI intervention may be an ineffective remediation at the level of performance if, in fact, the skill has not been acquired. This relates to the linguistic demands inherent in this SSI program, which had assumptions about students' pragmatic and verb knowledge.

IMPLICATIONS FOR COMMUNICATION DISORDERS PRACTICE

Because of a growing concern for and interest in youth with EBD, SLPs have recently examined the prevalence of language problems among adolescent delinquent girls (Sanger, Coufal, Scheffler, & Searcey, 2003) and the efficacy of classroom-based pragmatic language intervention for children with EBD (Hyter et al., 2001). Central to this research is a concern that,

although students with EBD experience language delay (Giddan, Milling, & Campbell, 1996), 60% to 88% of these students typically will not receive a speech–language evaluation (Rogers-Adkinson & Griffith, 1999). Furthermore, although patterns of expressive language delay may be clinically observable in students presenting with language delays and/or EBD (Hyter et al., 2001), it is thought that their primary difficulty may be in the area of pragmatics or communication competence (Hummel & Prizant, 1993), an area in which the criteria for objective assessment is not easily met (Bishop & Baird, 2001).

This concern extends to such language-based interventions as SSI. Examining the contextual demands for students to participate in the SSI intervention of our study revealed a protocol for training social skills, referred to as replacement skills, that all students were expected to master in a sequential (stepwise) order. The protocol was based on the expectation that students had acquired the linguistic skills necessary to make reflective decisions regarding their social behaviors. For example, the following statements are included in the first level of training for Knowing Your Feelings: "Think of how your body feels. Decide what you would call this feeling. Say to yourself, 'I feel _____'." The crucial verbs, which define the expected performance of the student, are think, decide, and say. As Nippold (1998) has shown, these verbs are in categories that do not fully develop until early adulthood, or may never develop, due to the metalinguistic and metacognitive demands of understanding and using these linguistic forms. Literate verbs include such vocabulary as assert, concede, infer, conclude, imply, predict, interpret, remember, doubt, hypothesize, and assume. Factive verbs include such words as know, forget, be happy, be surprised, think, be sure, figure, say, and believe. There is a positive correlation between vocabulary development and these verbs and between the development of these verbs and critical thinking skills. The example statement above not only includes the actual

vocabulary that is included in the factive verbs listed by Nippold (think), but also implies the actions of literate verbs (infer, conclude, imply, interpret) through use of the term decide. The verb say, although considered a factive verb, can be regarded as a simple action verb when it refers to the simple act of imitation (i.e., “Say ball.”). When it suggests an action that requires inference (i.e., “I would say it is a politically motivated activity.”), it reflects a higher order, metalinguistic and metacognitive skill. In this example, and in the categorization of verbs listed in Table 1, the verb say is considered an action verb because it is intended to reflect a conscious activity that could be objectified or observed, rather than a purely reflective action that must be inferred. It is likely that the students in this study had not developed sufficient verb knowledge to incorporate the underlying verb concepts and associated pragmatic skills into their self-talk or self-regulatory behaviors.We interpreted our findings to mean that perhaps only those students in Group 1 were linguistically mature enough to actually internalize the SSI to a level sufficient to actually influence behavior.

To be a competent communicator requires skills that are defined within the language aspects of semantics, syntax, morphology, and phonology. The demands of social–communicative competence require that the individual efficiently interpret the situational constraints that predict the language that is to be used, as well as the specific aspects of the linguistic code, from the variety of options available to the speaker and listener. This includes both the speech community context and the generic situational context (Anderson, Lee-Wilkerson, & Chabon, 1996). Thus, the decalage between linguistic, cognitive, and behavioral development must be congruent for the type of SSI studied here to be effective. Finally, we encourage SLPs to continue their active involvement in research that helps sharpen language-based diagnostic criteria for students with EBD. In addition, SLPs could, from a pragmatics

language perspective, help establish a greater understanding of the potential for certain state and action verbs to improve outcomes for students with EBD supporting their progress away from dangerous and self-destructive behavior toward insight, self-regulation, and self-respect.

ABOUT THE AUTHORS

John W.Hill, PhD, is professor and chair of the Department of Educational Administration and Supervision at the University of Nebraska at Omaha. Dr. Hill has remained an active practitioner in assessing and teaching students with special challenges while working with parents, teachers, and administrators to improve students' academic and social outcomes. *Kathy L. Coufal*, PhD, is professor and chair of the Department of Communication Sciences and Disorders at Wichita State University. Her interests relate to language development and disorders, professional collaboration, and services for infants, toddlers, and families. Address: John W.Hill, Educational Administration and Supervision, University of Nebraska at Omaha, Kayser Hall 414, 6001 Dodge Street, Omaha, NE 68182-0162; e-mail: jhill@mail.unomaha.edu

REFERENCES

Adams, C. (2001). Clinical diagnostic and intervention studies of children with semantic-pragmatic language disorder. International Journal of Language & Communication Disorders, 36, 289–305.

Algozzine, R. (1990). Problem behavior management: Educators resource service. Rockville, MD: Aspen.

American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders (3rd ed., rev.).Washington, DC: Author.

Anderson, N. B., Lee-Wilkerson, D., & Chabon, S. S. (1996). Preschool language disorders. Rockville, MD: NSSLHA.

Asher, S. R., & Gazelle, H. (1999). Loneliness, peer relations, and language disorders in childhood. Topics in Language Disorders, 19(2), 16–33.

Baltaxe, C., & Simmons, J. (1990). The differential diagnosis of communication disorders in child and adolescent psychopathology. Topics in Language Disorders, 10(4), 17–31.

Bauer, A. M., Shea, T. M., & Keppler, R. (1986). Level systems: A framework for the individualization of behavior management. Behavior Disorders, 12, 28–35.

Beitchman, J. H. (1985). Speech and language impairment and psychiatric risk: Toward a model of neurodevelopmental immaturity. The Psychiatric Clinics of North America, 8, 721–735.

Beitchman, J. H., Cohen, N. J., Konstantareas, M. M., & Tannock, R. (Eds.). (1996). Language, learning, and behavior disorders: Developmental, biological, and clinical perspectives. New York: Cambridge University Press.

Bernstein, D., & Levey, S. (2002). Language development: A review. In D. Bernstein & E. Tiegerman-Farber (Eds.), Language and communication disorders in children: Fifth edition (pp. 27–94). Boston: Allyn & Bacon.

Bishop, D. V. M., & Baird, G. (2001). Parent and teacher report of pragmatic aspects of communication: Use of the Children's Communication Checklist in a clinical setting. Developmental Medicine and Child Neurology, 43, 809–818.

Brinton, B., & Fujiki, M. (1993). Language, social skills and socioemotional behavior. Language, Speech, and Hearing Services in Schools, 24, 193–198.

Brinton, B., & Fujiki, M. (1999). Social interactional behaviors of children with specific language impairment. Topics in Language Disorders, 19(2), 49–69.

Brown, A. J. (1994). Language deficiencies. In S. Adler & D. A. King, (Eds.), Oral communication problems in children and adolescents (2nd ed.; pp. 19–50). Boston: Allyn & Bacon.

Caldarella, P., & Merrell, K. (1997). Common dimensions of social skills of children and adolescents: A taxonomy of positive behaviors. School Psychology Review, 26, 264–278.

Cantwell, D. P., & Baker, L. (1987). Prevalence and type of psychiatric disorder and developmental disorders in three speech and language groups. Journal of Communication Disorders, 20, 151–160.

Cantwell, D. P., & Baker, L. (1991). Psychiatric and developmental disorders in children with communication disorders.Washington, DC: American Psychiatric Press.

Capaldi, D. M., & Patterson, G. R. (1996). Interrelated influences of contextual factors on antisocial behavior in childhood and adolescent males. In D. Fowles, P. Sutker, & S.

Goodman (Eds.), Psychopathology and antisocial personality: A developmental perspective (pp. 165–198). New York: Springer.

Cosden, M. R., Gannon, C., & Haring, T. G. (1995). Teacher-control versus student-control over choice of task and reinforcement for students with severe behavior problems. Behavioral Education, 5, 11–27.

Elias,M., & Clabby, J. (1992). Building social problem solving skills: Guidelines from a school-based program. San Francisco: Jossey-Bass.

Elliott, S. N., & Gresham, F. M. (1992). Social skills intervention guide. Circle Pines, MN: American Guidance Service.

Fowler, M., Barkley, R., Reeve, R., & Zentall, S. (1990). Educator's manual. Plantation, FL: Children and Adults with Attention Deficit Disorders.

Fujiki, M., Brinton, B.,Hart, C.H., & Fitzgerald,A.H. (1999). Peer acceptance and friendship in children with specific language impairment. Topics in Language Disorders, 19(2), 34–48.

Gallagher, T. M. (1999). Interrelationships among children's language, behavior, and emotional problems. Topics in Language Disorders, 19, 1–15.

Gee, J. P. (1997). Thinking, learning, and reading: The situated sociocultural mind. In D. Kirshner & J. A. Whitson (Eds.), Situated cognition: Social, semiotic, and psychological perspectives (pp. 235–257).Mahwah, NJ: Erlbaum.

Giddan, J., Milling, L., & Campbell, N. (1996). Unrecognized language and speech deficits in preadolescent psychiatric inpatients. The American Journal of Orthopsychiatry, 66, 85–92.

Goldstein, A. (1988). The prepare curriculum. Champaign, IL: Research Press.

Goldstein, A. P., Glick, B., & Gibbs, J. C. (1998). Aggression replacement training: A comprehensive intervention for aggressive youth (Rev. ed.). Champaign, IL: Research Press.

Goldstein, A. P., & McGinnis, E. (1997). Skillstreaming and the adolescent: New strategies and perspectives for teaching prosocial skills (Rev. ed.). Champaign, IL: Research Press.

Goldstein, H., & Morgan, L. (2002). Social interaction and models of friendship development. In H. Goldstein & L. Kaczmarek (Eds.), Promoting social communication: Children with development disabilities from birth to adolescence: Communication and Language intervention series (10; (pp. 5–25). Baltimore: Brookes.

Gresham, F. M. (1992). Social skills and learning disabilities: Casual, concomitant, or correlated. School Psychology Review, 21, 348–360.

Gresham, F. M., & MacMillan, D. L. (1997). Social competence and affective characteristics of students with mild disabilities. Review of Educational Research, 67, 377–415.

Gresham, F. M., Sugai, G., & Horner, R. H. (2001). Interpreting outcomes of social skills training for students with high- incidence disabilities. Exceptional Children, 67, 331–344.

Hoff, E. (2001). Language development. Belmont, CA. Wadsworth/Thomson Learning.

Hummel, L. J., & Prizant, B.M. (1993). A sociometric perspective for understanding social difficulties of school-age children with language disorders. Language, Speech, and Hearing Services in Schools, 24, 216–224.

Hyter, Y. D., Rogers-Adkinson, D., Self, T. L., Simmons, B. F., & Jantz, J. (2001). Pragmatic language intervention for children with language and emotional/behavioral disorders. Communication Disorders Quarterly, 23, 4–16.

Individuals with Disabilities Education Act of 1990, 20 U.S.C. § 1400 et seq. (1990) (amended 1997).

Jones, R. N., Downing, R.H., Latkowski,M. E., Ferre, R. C., & McMahon,W. M. (1992). Level systems as shaping and fading procedures: Use in a child inpatient psychiatry setting. Child & Family Behavior Therapy, 14, 15–37.

Jones, R. N., Mandler-Provin, D., Latkowski, M. E., & McMahon, W. M. (1987). Development of reinforcement survey for inpatient psychiatric children. Child & Family Behavior Therapy, 9, 73–77.

Kelley, B. T., Loeber, R., Keenan, K., & DeLamatre,M. (1997). Developmental pathways in boys' disruptive behavior. Juvenile Justice Bulletin: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention, 12, 1–20.

Kern, L.,Wacker, D. P., Mace, F. C., Falk, G. D., Dunlap, G., & Kromrey, J. D. (1995). Improving the peer interactions of students with emotional and behavioral disorders through self- evaluation procedures: A component analysis and group application. Journal of Applied Behavior Analysis, 28, 47–59.

Kupersmidt, J., Coie, J., & Dodge, K. (1990). The role of peer relationships in the development of disorder. In S. Asher & J. Coie (Eds.), Peer rejection in childhood (pp. 274–308). New York: Cambridge University Press.

Letts, C., & Leinonen, E. (2000). Comprehension of inferential meaning in language-impaired and language normal children. International Journal of Language & Communication Disorders, 36, 307–328.

Maag, J.W., & Katsiyannis,A. (1999). Teacher preparation in EBD: A national survey. Behavioral Disorders, 24, 189–196.

MacKay, G., & Anderson, C. (2000). Teaching children with pragmatic difficulties of communication: Classroom approaches. London, UK: David Fulton.

Marder, C., & Cox, R. (1991).More than a label: Characteristics of youth with disabilities. In M. Wagner, L. Newman, & R. D'Amico, Youth with disabilities: How are they doing? The first comprehensive report from the National Longitudinal Transition Study of Special Education Students (pp. 50–86).Menlo Park, CA: SRI International.

Merrell, K. (1993). School social behavior scales. Austin, TX: PRO-ED.

Newcomb, A., Bukowski,W., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average children. Psychological Bulletin, 113, 99–128.

Nippold, M. A. (1998). Later language development: The school-age and adolescent years (2nd ed.). Austin, TX: PRO-ED.

Nippold, M. A. (2000). Language development during the adolescent years: Aspects of pragmatics, syntax, and semantics. Topics in Language Disorders, 20(2), 15–28.

Olswang, L., Coggins, T., & Timler, G. (2001). Outcome measures for school age children with social communication problems. Topics in Language Disorders, 20(2), 15–28.

Parker, J.G., & Asher, S. R. (1987). Peer relations and later personal adjustments: Are low-accepted children at risk? Psychological Bulletin, 102, 357–389.

Rogers-Adkinson, D., & Griffith, P. (Eds.). (1999). Communication disorders and children with psychiatric and behavioral disorders: Theory and intervention (pp. 177–258). San Diego, CA: Singular.

Sanger, D., Coufal, K. L., Scheffler, M., & Searcey, R. (2003). Implications of the personal perceptions of incarcerated adolescents concerning their own communicative competence. Communication Disorders Quarterly, 24, 64–77.

Sanger, D., Moore-Brown, B., Magnuson, G., & Svoboda, N. (2001). Prevalence of language problems among adolescent delinquents: A closer look. Communication Disorders Quarterly, 23, 17–26.

Sherman, L.W., Gottsfredson, D., MacKenzie, D., Eck, J., Reuter, P., & Bushway, S. (1997). Preventing crime: What works, what doesn't, what's promising. Washington, DC: U.S. Department of Justice.

Siegel, B. (1996). Atypical ontogeny: Atypical development from a developmental perspective. In J. H. Beitchman, N. J. Cohen, M. M. Konstantareas, & R. Tannock (Eds.), Language, learning, and behavior disorders: Developmental, biological, and clinical perspectives (pp. 38–58). New York: Cambridge University Press.

Smith, S. W., & Farrell, D. T. (1993). Level system use in special education: Classroom intervention with prima facie appeal. Behavior Disorders, 18, 251–264. Vygotsky, L. (1962). Thought and language. Cambridge, MA: MIT Press.

Wagner, M. M. (1995). Outcomes for youths with serious emotional disturbance in secondary school and early adulthood. The future of children. Critical Issues for Children and Youths, 5, 90–112.

Walker, H., Irwin, L., Noell, L., & Singer, G. (1992). A construct score approach to the assessment of social competence: Rationale, technological considerations, and anticipated outcomes. Behavior Modification, 16, 448–474.

Walker, H., & McConnell, S. (1995). Walker-McConnell scale of social competence and school adjustment. San Diego, CA: Singular.

Wertsch, J. (1985). Vygotsky and social formation of mind. Cambridge, MA: Harvard University Press.

Westby, C. E. (1998). Assessment of pragmatic competence in children with psychiatric disorders. In D. L. Rogers-Adkinson & P. L. Griffith (Eds.), Communication and psychiatric disorders in children: Theory and intervention (pp. 177–258). San Diego, CA: Singular.