Social Skills Training

Evaluating its Effectiveness for Students with Learning Disabilities, Emotional, and Behavioral Disorders

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Abstract

The purpose of this review is to describe important criteria used to evaluate the effectiveness of Social Skills Training Programs. The analysis defines social skills, discusses causes and effects of social skill deficits, and examines the research establishing criteria described by teachers, administrators, and students. The paper concludes with how these variables interact to affect the students' response to intervention programs.

Social Skills Training: Does it Work?

In the words of Forness and Kavale (1996, p. 1), "Although social skills training or intervention for children with learning disabilities has been widely used in the past 15 years, little systematic synthesis of its effectiveness is available." The current emphasis in the diagnosis and treatment of learning disabilities has changed from a reactive, discrepancy-based or 'wait–to-fail' model to one which informs teaching based on a child's response to intervention. Indeed, response to intervention is the central theme of the 2005 Individuals with Disabilities Education Act (IDEA). Evidence-based best practices are replacing the trial and error methods of the past. Thus, it follows that educators of children suffering from emotional and behavior disorders ask: What are we doing? Why are we doing it? Is it effective? How do we know?

The concept of social skills training presents a conundrum. Are social skills deficits caused by, or do they cause, learning disabilities? Elksnin and Elksnin (1998), citing Forness et al, reported that social skills deficits are comorbid with learning disabilities in approximately 75% of affected students. Social skills deficits may be symptomatic of deeper developmental or cognitive issues, and there is disagreement as to whether social skills deficits are simply correlated to learning disabilities, are caused by learning disabilities, or are themselves the cause of learning problems. Can we identify risk factors for social skills deficits? What roles do SES and heredity play? How can we effectively identify "at risk" students? At what stage of development is intervention likely to be most effective? How can measurements of success be validated?

Forness and Kavale (1996), in a meta-analysis of 53 studies of social skills training programs, noted an effect size of only 0.211, while Gresham's meta-analysis (1997) reported a range of effect sizes from 0.20 to 0.50:

"The sampling of studies for meta-analysis was initially derived from abstract and citation archives, reference lists from literature reviews, and bibliographies from research reports. To be included, an entry had to focus both on children or adolescents with learning disabilities and on training or

enhancement of specific behaviors or cognitive functions performed when interacting with others to conduct oneself competently on a social task (Gresham, 1986). An ES of + 1.00 indicates a one standard deviation superiority for the treatment group, which means that 84% of treated subjects were better off than untreated (control) subjects. On average, the effects of training would move treated subjects to the 84th percentile, where they would demonstrate a 34 percentile rank gain on an outcome measure compared to untreated subjects who would remain at the 50th percentile" (Forness & Kavale, 1996).

Gresham (2004) noted that the wide variability in estimated effect size produced by meta-analyses of the literature may be attributed to a number of factors not directly related to social skills training, in particular the wide range of test subjects. Measurement methodology further complicates attempts at quantitative analysis. Kavale and Mostert (2004) found:

"Instead of … norm-referenced measures, most studies used criterion-referenced measures often lacking reliability and validity data to support their use. Thus, the measurement problems make it difficult to demonstrate that an intervention actually worked."

This suggests that traditional quantitative measures may not provide reliable results.

Efforts by researchers to validate the effects of treatment have led to the single greatest criticism of social skills training: lack of generalization. Internalization or generalization of desired prosocial behaviors is the ultimate measure of success, but it is an assessment which is both inherently inexact and wildly subjective. Generalization means creating a quantity and quality of change in an individual's behavior that would result in an observable difference in that person's functioning in a variety of social environments. Some children who receive focused social skills training in specialized settings can demonstrate a high level of competency within that specific social context. When these children interact socially in a more naturalistic setting, the skills they have demonstrated in the small group setting may not consistently transfer – they behave the way they have always behaved. There are a number of probable causes for this lack of generalization. As Gresham (1997) observed, "The main problem with selected interventions is that they decontextualize social behavior." Viewing behavior as a response to a perceived stimulus, Gresham conjectured that new behaviors may fail to generalize because they are "masked or overpowered by older and stronger competing behaviors" (p.11). Competing antisocial behaviors may be performed instead of desired behaviors because the competing behaviors are more efficient. Concretely, grabbing for food is more efficient than asking for it politely. Thus, "preexisting behaviors are likely to compete successfully with newly trained social skills if the preexisting behaviors lead to more powerful or immediate reinforcers … (i.e., they are more cost-beneficial)" (Gresham). This problem increases with the age of the child, as behaviors become habitual and the child's peer-orientation increases.

Wolf (1978) posited that social skills training must be socially valid, and that social validity has three essential components: (a) social significance of behavioral goals; (b) social appropriateness (cost effectiveness); and (c) social importance as related to a child's quality of life. Storey (1996) makes a compelling case for "social validation … assessing the social importance of … the outcomes of social skills training" (p. 1). Human interaction takes place in an infinitely variable and complex social context. Therefore, a valid evaluation of the effectiveness of social skills training must be done not only with an awareness of the context in which social skills (or skills deficits) are displayed, but must also consider social significance, cost-effectiveness, and quality of life. This is what Gresham (2004) and Wolf (1978) described as social validation.

What are Social Skills?

Grizenko, Hrychko, and Pawliuk (2000) called social skills acquisition "*an important accomplishment in childhood.*" Social skills are a subset of the more general category of interpersonal intelligence, i.e., the ability to understand other people. Daniel Goleman (1995) called the ability to understand other people emotional intelligence. From a behavioral viewpoint, Foster and Ritchey (1979) defined social skills as "*those situationally-specific behaviors that maximize the probability of securing or maintaining reinforcement and decreasing the likelihood of punishment or extinction contingent upon one's social behavior."* While teachers and school administrators have tended to view the causes of problem behaviors differently, they tend to measure social competence with similar benchmarks.

Administrators tend to look outside the school when attributing student behavioral problems (Gresham, 2004). Teachers have historically viewed the causes of behavior problems as 'the home situation' and 'within child' factors (Ysseldyke, Pianta, Christenson, Wang, & Algozzine, 1983). Despite differences of viewpoint as to cause, there is general agreement among teachers and administrators on behaviors which contribute to success in the school environment. Warger and Rutherford (1996) discussed such social skills such as following directions, sharing materials, and waiting one's turn as basic skills needed for participation in a classroom. Desired prosocial behaviors in this context include (a) the student staying in his or her seat, (b) attending to instruction, (c) working independently, (d) not displaying aggression or defiance, and, (e) not swearing, stealing, or vandalizing school property (Hersh and Walker (1983).

For the purpose of diagnosis and treatment, social skills are typically described in terms of skill deficits. These deficits are classified by attribution as to their causes. Acquisition deficits refer to those social skills which the child may not have had the ability or opportunity to acquire. Performance deficits assume that the child knows the appropriate social skill, but may not perform it because of competing stimuli or deficits, such as anxiety (Kavale & Mostert, 2004). Diagnosis and treatment are made more difficult because "…*target behaviors typically are non-linear, benchmark levels of performance are idiosyncratic to teacher and/or school tolerance levels for behavior, and normative information for direct measures of behavior typically do not exist*"(Gresham 2004).

Newcomb, Bukowski, and Pattee (1993) organized behavior patterns into three categories: sociability (moving toward others), aggression (moving against others), and withdrawal (moving away from others). Aggression and withdrawal are antisocial behaviors, and students who display these externalizing behaviors are likely to be less successful in social settings. Because of the visibility of these behaviors, children who display externalizing behaviors are more likely to be identified for behavioral interventions such as social skills training.

Severe deficits in the area of interpersonal intelligence are broadly categorized as Emotional Impairments or may be classified as specific Behavior Disorders. IDEA (1996) defined serious emotional disturbance as an inability to build or maintain satisfactory relationships with peers or teachers and demonstrating inappropriate types of behavior or feelings under normal circumstances.

Children with social skills deficits may display:

- A lack of sensitivity to others
- Poor perception of social situations
- Difficulty making friends

In the classroom, these deficits may manifest themselves as:

- Impulsive Behavior
- Disruptive Social Behavior
- Inept Social Behavior

Some children may be diagnosed with social skills deficits that stem from a range of developmental disorders known as Nonverbal Learning Disabilities. This type of disability, believed to be a neurological dysfunction in the right hemisphere of the brain, differs markedly from academic, linguistic, and cognitive disability. Children with nonverbal learning disabilities often experience difficulties with social interactions, interpersonal skills, and adapting to new situations (Lerner, 2003). They also have difficulty understanding nonverbal communication, such as body language, voice tone, and facial expression. Children suffering from the pervasive developmental disorders classified as Autistic Spectrum Disorders may have great difficulty developing appropriate peer relationships and understanding social contexts.

It is important to note that not all students who display social skills deficits are alike. Some may have normal or even superior cognitive function but exhibit maladaptive behaviors. Nowicki (2003) conjectured that "… children who have learning difficulties, regardless of special education classification systems, may have similar deficits in processing social information" (p.185). Some children may suffer from conduct or behavior disorders which interfere with their success in school. Many factors can affect student behavior in the school setting, including dyslexia and related disorders, parenting, nutrition, and transient lifestyle (Lane & Menzies, 2005, Darling 1999). SES, mental illness, and developmental factors may also play a role. These same factors appear to have a connection to a student's ability to respond to intervention strategies (Lane & Menzies). The tables below, developed by Walker and Shinn (2003) provide a concise and useful inventory of antisocial factors and mitigating prosocial factors which both predict the risk of social skills deficits and interfere with response to treatment.

Figure 1

Risk and Protective Factors Associated With Antisocial and Criminal Behavior

RISK FACTORS

Child Factors	Family Factors	School Context	Community and Cultural Factors
prematurity	**Parental characteristics:**	school failure	socioeconomic disadvantage
low birth weight	teenage mothers	normative beliefs about aggression	population density and housing conditions
disability	single parents	deviant peer group	urban area
prenatal brain damage	psychiatric disorder, especially depression	bullying	neighborhood violence and crime
birth injury	substance abuse	peer rejection	cultural norms concerning violence as acceptable response to frustration
low intelligence	criminality	poor attachment to school	media portrayal of violence
difficult temperament	antisocial models	inadequate behavior management	lack of support services
chronic illness	**Family environment:**		social or cultural discrimination
insecure attachment	family violence and disharmony		
poor problem solving	marital discord		
beliefs about aggression	disorganized		
attributions	negative interaction/ social isolation		
poor social skills	large family size		
low self-esteem	father absence		
lack of empathy	long-term parental unemployment		
alienation	**Parenting style:**		
hyperactivity/ disruptive behavior	poor supervision and monitoring of child		
impulsivity	discipline style (harsh or inconsistent)		
	rejection of child		
	abuse		
	lack of warmth and affection		
	low involvement in child's activities		
	neglect		

Table 1 continued on page 8

Walker and Shinn, 2003

Figure 2

PROTECTIVE FACTORS

Child Factors	Family Factors	School Context	Community and Cultural Factors
social competence	supportive, caring parents	positive school climate	access to support services
social skills	family harmony	prosocial peer group	community networking
above-average intelligence	more than 2 years between siblings	responsibility and required helpfulness	attachment to the community
attachment to family	responsibility for chores or required helpfulness	sense of belonging/ bonding	participation in church or other community group
empathy	secure and stable family	opportunities for some success at school and recognition of achievement	community/ cultural norms against violence
problem solving	supportive relationship with other adult	school norms concerning violence	a strong cultural identity and ethnic pride
optimism	small family size		
school achievement	strong family norms and morality		
easy temperament			
internal locus of control			
moral beliefs			
values			
self-related cognitions			
good coping style			

Effects of Social Skills Deficits

Social skills deficits result in a reduced quality of life for those who suffer from them, an effect that tends to be lifelong. Court and Givon (2003) observed that children with learning disabilities report feelings of isolation and lack of fulfillment in social situations and that this can contribute to a negative self-image. Stanovich, Jordan, and Perot (1998) also found that students identified as having learning disabilities scored lowest on measures of peer acceptance and were socially isolated. Students with untreated social skills deficits are at risk for poor school, social, and vocational outcomes (Montague, Enders, & Castro, 2005).

One of the most fundamental social skills deficits is the inability to develop and maintain positive peer relationships. Smith and Gilles (2003) reported that difficulty in the area of peer relationships is an early indicator of risk for delinquency and suicide, while also noting that "few social skills training efforts have considered normative developmental issues and associative changes in peer relationships"(p.31). The pivotal importance of building and maintaining developmentally-appropriate, prosocial peer relationships cannot be overstated. Prater, Bruhl, and Serna (1998) observed that children suffering from EBD (Emotional and Behavioral Disorders) may interact socially but that those interactions tend to be negative or aggressive, and that these children may be socially isolated. Choi and Kim (2003) reported that elementary school children rejected by their peers showed lower composite test scores than those who were accepted by their peers. Discussing his preliminary investigation of peer relationships in at-risk children, Gresham (1997) found that friendships promoted prosocial school behaviors, including academic task completion and conflict management. Sadly, the study also concluded that "about 80% of at-risk children do not have a single friend in a general education classroom":

"*Defining "friendship" as the number of reciprocal "Like Most" nominations (maximum of 3), … only about 20% of at-risk 3rd grade children have one or more friends in a typical general education classroom compared to about 50% of age-and gender-matched control children*"(p.5).

Historically, intervention efforts intended to address social skills deficits have employed reactive rather than proactive measures. Meadows, Melloy, and Yell (1996) observed: "When teachers deal with students who have emotional and behavioral disorders in the general classroom, control and containment tend to be their main goal." Because of this, students identified for treatment have been primarily those who have displayed externalizing behaviors: violence, aggression, verbal abuse, and disruptiveness. Disruptive students demand a disproportionate share of teacher and peer attention and other school resources. Unfortunately, reactive treatment efforts tend to result in segregation or isolation from peers, the first link in a chain of events which leads to school failure. This reactive, punitive response to externalizing behaviors can result in a broad range of unintended consequences. When children spend a significant portion of the school day out of the classroom, they fall behind their peers academically. This effect is compounded by the child's increasingly negative and aversive attitude toward school. At the same time, there is correspondingly less attention paid by the teacher to other students in the class, less time-on-task, and the depth and breadth of the subject matter students receive by direct instruction may be reduced. Not only do disruptive students inhibit their own educational success, but their behavior negatively affects the progress of their peers, as well.

An emphasis on school accountability and grade-level subject mastery can lead to grade retention, or what Vitaro, Brendgen, and Tremblay (1999) referred to as non-AARC (Age Appropriate Regular Classroom) placement. Non-AARC placement can have significant negative effects which are at odds with the social validation criteria set forth by Wolf(1978). As Vitaro et al (1999) reported:

"*The risk of dropping out of school was more than 4 times as high for children in non-AARC environments than for children who remained in AARC environments. Even more notably, being placed in non-AARC environments significantly predicted later school dropout, even after controlling for IQ and sociofamilial variables" (p.220).*

Non-AARC placement can be a humiliating experience for a child. The stigma of grade retention or Special Education placement can have a negative effect on a child's self-concept. Self-concept is particularly important because it is a strong predictor of future achievement. Non-AARC placement may expose the child to peers with similar behavior problems, as well as younger or older peers who are at different stages of emotional and physical development. Vitaro et al (1999) also reported that peer rejection "significantly contributed to early school dropout" (p.221).

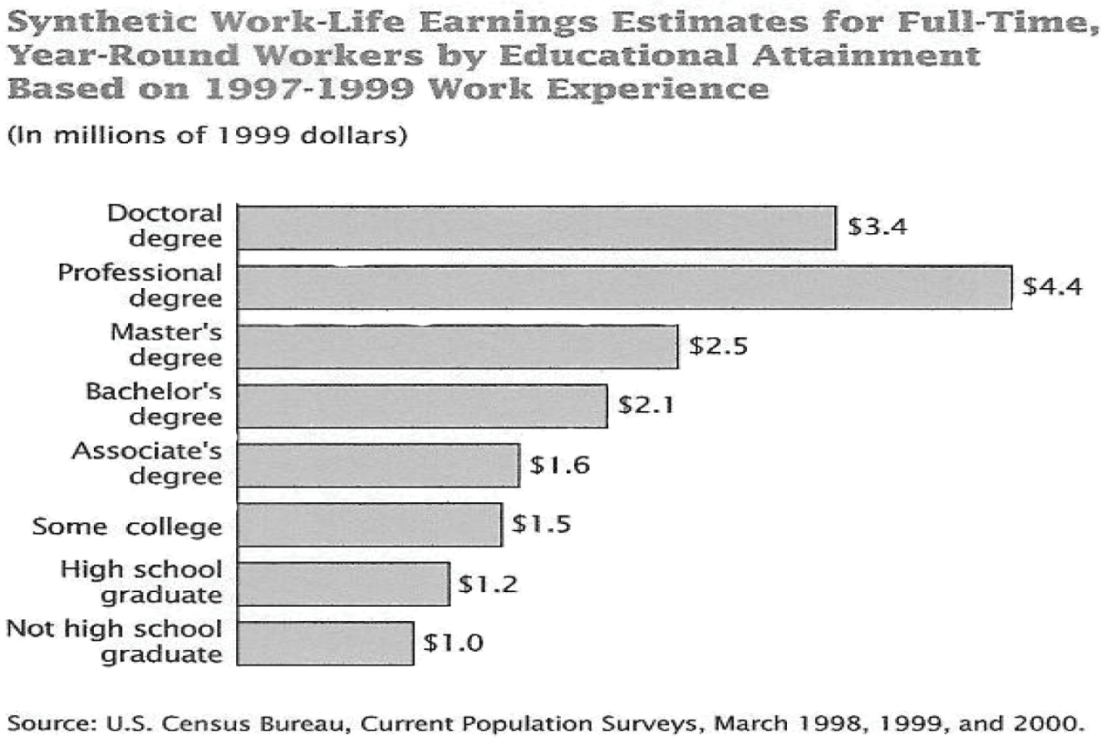
Using the definition of social skills from Foster and Ritchey (1979), "…behaviors that maximize the probability of securing or maintaining reinforcement and decreasing the likelihood of punishment or extinction", peer orientation (which increases with age), combined with non-AARC placement intrinsically reinforces and rewards antisocial behavior. Placed in a social milieu with other EBD (Emotionally and Behaviorally Disordered) children, the child is now seeking validation from a peer group which itself has internalized antisocial behaviors. In effect, we have created a social setting which is at odds with treatment goals and which actually facilitates an adverse selection of peers. It is precisely this phenomenon of iatrogenesis which led Arnold and Hughes (1999) to conclude, "Grouping deviant youth for treatment may produce unintended, harmful effects" (p.99).

Juvenile delinquency and dropping out of school have well-documented effects which extend beyond the quality of life of an individual to the greater society. It has been established that children with social skills deficits are at risk for delinquency (Smith & Gilles, 2003). The direct monetary cost to society of delinquency is enormous: Aos (1999) reported that, for juvenile offenders likely to become recidivists, approximately US$30,000.00 in long-term savings is realized for each subsequent arrest avoided or prevented. When we consider that high risk students (those requiring the tertiary level of ongoing intervention) make up 1-7% of a school population numbering 53.1 million students ages 5 – 17 (Gibson 2001), the potential expense avoided expands to billions of dollars.

Dropping out of school is very expensive, resulting in a reduced quality of life which is a direct result of lack of employment and low wages. Walker and Shinn (2003), citing 1998 U.S. Department of Labor data, indicated that only 43% of high school dropouts were employed. Of those high school dropouts who manage to obtain work, average earnings (in 1999 USD) were only $18,900 (Day & Newburger, 2002):

"*Synthetic' estimates of work-life earnings are created by using the working population's 1-year annual earnings and summing their age-specific average earnings for people ages 25 to 64 years. The resulting totals represent what individuals with the same educational level could expect to earn, on average, in today's dollars, during a hypothetical 40-year working life. A typical work-life is defined as the period from age 25 through age 64. While many people stop working at an age other than 65, or start before age 25, this range of 40 years provides a practical benchmark for many people*."

Figure 3



The chart above, extracted from Day and Newburger, graphically illustrates a "work – life" earnings discrepancy of US$200,000.00. In financial terms, failing to complete high school carries with it a substantial opportunity cost. The follow-on societal costs of unemployment, including the cost of entitlement programs must be considered as well.

Response to Intervention

There are three essential components to social skills training: promoting skill acquisition, enhancing skills performance, and facilitating generalization (Ladd & Mize, 1983, Choi and Kim, 2003). Typical treatment methods include:

- Direct instruction
- Coaching
- Modeling
- Rehearsal
- Shaping
- Prompting
- Reinforcement

Gresham (2004) noted that, "interventions based on applied behavior analysis, behavioral therapy, or cognitive behavior therapy methods have been shown to be superior…" (p.328). Smith and Gilles (2003) suggested six instructional strategies to promote generalization and maintenance of social skills:

(a) instruction in meaningful environments; (b)embedding instruction; (c) skill clustering; (d)using stimulus and response variations; (e) enabling response to natural cues; and (f) providing choices.

Careful selection of evidence-based interventions matched to the level and intensity of the problem behavior through the use of Functional Behavior Analysis techniques is a critical component for effective treatment. We can define response to intervention (RTI) as the change in behavior or performance as a function of intervention (Gresham 2004). Employing an RTI problem-solving model, the effectiveness of an appropriately chosen and faithfully implemented intervention can then be accurately evaluated. The selected intervention then becomes the single dependent variable.

Unfortunately, fidelity of treatment has not been the hallmark of behavioral interventions in schools. Treatment integrity, sometimes referred to as fidelity of treatment, remains an important issue. The term treatment integrity "refers to the degree [to] which an intervention is implemented as planned or intended" (Gresham, 2004). This problem becomes more acute as we seek to design treatment strategies based on the child's response to intervention. Kavale and Mostert (2004) argued that "*… a clear rationale for providing social skills interventions should rest on whether they are geared (a) toward students who have never learned the skills, or (b) toward those who possess the skills but have to shape, reform, enhance, or increase the frequency of these skills*" (p.41). Gresham, citing Gottfredson and Gottfredson (2001), found that schools often choose interventions based on their ease of use, popularity, or personal appeal, and that these interventions often are not empirically supported. In their meta-analysis of 53 studies of the effectiveness of social skills training, Kavale and Mostert (2004) reported an effect size of 0.211, identical to the effect size noted by Forness and Kavale in 1996. In terms of statistical significance, an effect size of 0.211 is considered to be small. Further reading calls into question the validity of this conclusion because the input used in the studies – a social skills training program – "… was designed for that particular research investigation" (Kavale & Mostert, p. 37). Furthermore, they found:

"*These programs usually represented an amalgam of techniques and procedures gleaned from the literature that often presented no clear rationale and little pilot testing. Thus, while "research" programs may possess face validity, without information about how well the program met its intended purpose, it is difficult to reliably characterize the type of social skills training provided. Although a number of potentially effective training packages are available… they were seldom used in the studies reviewed for the meta-analyses*" (p.38).

Social skill deficits are difficult to treat, and the effects of treatment seem to diminish with time. This diminution of effect may be exacerbated by the current 'wait-to-fail', reactive mode of treatment used in schools. Grizenko, Hrychko, and Pawliuk (2000) observed that "… students with major behavioral problems are frequently subjected to school suspension as a form of intervention" (p.501). Smith and Gilles (2003) suggested that an indication of successful social skills training would be the result that a child is no longer being separated or isolated from his or her peers. As discussed earlier, we tend to treat the most egregious cases punitively while ignoring the underlying causes of the behavior. When the underlying cause is addressed, results can be significantly improved. For example, Coie and Krehbiel (1984) found that academic tutoring of at-risk children led to higher academic achievement, lower rates of disruptive and off-task behavior, and higher peer acceptance, and that higher peer acceptance was maintained at one year follow-up.

There is strong evidence that the majority of children attending school can and will respond to social skills training (Walker & Shinn, 2003, Gresham 2004). More than 80% of children will respond to primary universal intervention strategies targeted to prevent antisocial behavior. These children would

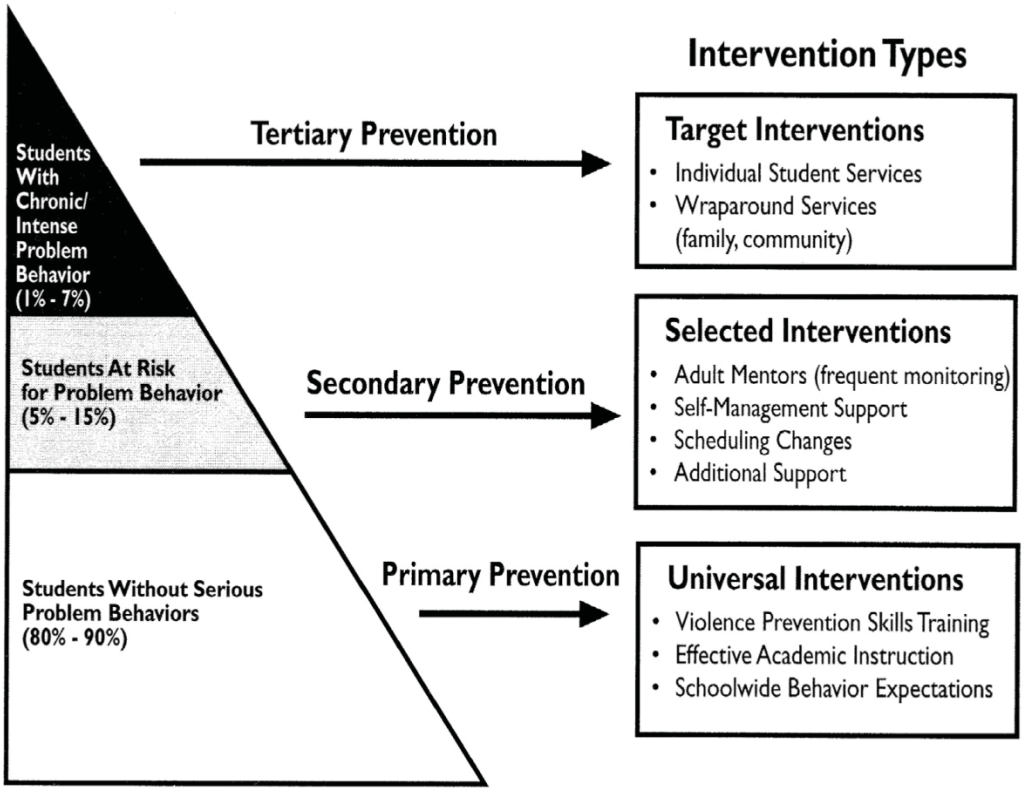
be classified as "typically developing, non-at-risk students" (Walker & Shinn, p. 15). Universal interventions serve to promote the two fundamental goals of education: the academic and social development of students (Gresham 2004, Stanovich, Jordan, and Perot, 1998).

A primary prevention strategy is based on "teaching all students and staff school-based rules and expectations … (and) establishing disciplinary policies and procedures … designed to enhance the smooth operation of a school environment (Walker & Shinn, p. 15). McConaughy, Kay, and Fitzgerald (2000) reported that most successful programs included both primary school-wide prevention efforts employed in conjunction with secondary prevention strategies to help at-risk students. In addition, their longitudinal study of 82 first and second grade students found a greater number of significant positive effects for at-risk children who received more intensive instruction for a longer period of time (two years versus one year). Significantly, meta-analyses by Forness and Kavale (1996) and by Kavale and Mostert (2004) reported that the social skills programs they studied evaluated the effects of approximately 30 hours (3 hours per week for 10 or less weeks) of training. Commenting on the "small" effect size they found, Kavale and Mostert (2004) observed: "…30 hours of intervention may simply be insufficient to ameliorate enduring social problems" (p. 38). It appears that both the length of time and the timing of intervention efforts play significant roles in achieving positive outcomes.

In Figure 4, Walker and Shinn classified three levels of intervention based on the child's response:

Figure 4

Primary, Secondary, and Tertiary Systems of Intervention



[Walker & Shinn (2003)].

There is a clear correlation between a child's response to intervention and the age at which it is employed. McConaughy, Kay, and Fitzgerald (2000) recommended that interventions should begin by at least third grade (age 8); while Walker and Shinn (2003) noted that primary level, preventive interventions are most effective from ages 0 to 12 (p.10). Although, as previously noted, there are many factors which can affect a child's behavior and his or her response to intervention strategies, age is positively correlated for two reasons. Developmentally, younger children are more likely to be oriented toward parental and adult authority figures. This orientation is along a continuum of behaviors related to the child's dependency on parents and adults. Younger children, as a group, are more likely to want to please the adults in their lives. Expectations for behavior are more readily accepted and internalized by the child.

As the child continues to develop, his/her social orientation gradually shifts away from parents and adult authority figures toward peers. We know that humans seek out others with whom they perceive to share commonalities, and thus children with social skills deficits (like children in the general population) form their peer groups with children who are more like themselves. Secondly, as the child matures, behaviors become ingrained. Kavale and Mostert (2004) reported that "*Since the average treated student …was in 6th grade, it seems reasonable to assume that social skill deficits were relatively long-standing …*" (p.38). Uncorrected antisocial behaviors become normative for that child, and rehearsal (repetition) tends to strengthen and reinforce behavior, making problem behaviors more difficult to treat. This argues for early identification and treatment as a cost-effective and therefore socially valid approach.

A small fraction of students (1-7%) respond least favorably to social skills training. For these children, antisocial behavior has become habitual and chronic. They are affected by a greater number of antisocial risk factors and/or may display antisocial behavior due to developmental or organic problems. These children are least likely to have the opportunity to generalize social skills training in socially valid contexts. Children in this category would appropriately receive intensive tertiary level treatments, with a goal of reducing problem behaviors and increasing participation in the general education setting to the greatest extent possible. Response to intervention at this tertiary level is analogous to the treatment of a chronic disease: most will respond to treatment as long as the treatment is maintained. When treatment is discontinued, the symptoms reappear. Landrum, Tankersley, and Kauffman (2003) concluded that such intensive, tertiary-level interventions should extend over the entire school careers of affected students. Because the locus of control of this subgroup is almost entirely external, generalization is low, leading to poor social outcomes including recidivism. Even with positive behavior supports, this small segment of the school population is at great risk for delinquency, unemployment, suicide, and incarceration.

Discussion

Measuring the effectiveness of social skills training is a complex task. The concept of social skills encompasses a vast array of overt behaviors and unseen affective and cognitive processes (Nowicki 2003). Generalization across a huge range of unfamiliar settings and circumstances is tremendously difficult to accomplish. Is true generalization of social skills for children with social skills deficits possible? It can be argued that in unfamiliar settings and circumstances, even persons who do not suffer from a learning disability may display inept social behavior. Social skills are inherently context sensitive and even the most socially skilled person may encounter social contexts which they do not understand, thus increasing the odds of failure. Expecting a child to be "cured", to generalize appropriate social skills in all contexts and under all circumstances is unrealistic; we do not expect the same level of social competence from the general population. Our tendency to view the world through

our own paradigm creates an additional obstacle for students diagnosed with social skills deficits, as we unconsciously expect to see antisocial behaviors from those who have displayed them before. What we might perceive as a normal adolescent idiosyncrasy in a child not diagnosed with a social skills deficit may be perceived as proof of ineffective generalization in a child who bears the burden of that diagnosis.

There has been little progress to date producing useable, relevant quantitative measures of the effectiveness of social skills training. According to Forness and Kavale (1996):

It was clear from closer examination of studies used in the current meta-analysis that monitoring fidelity of treatment was not a high priority. Thus, one cannot be confident that interventions were always delivered in an effective manner. Further, the current meta-analysis was limited to comparisons of treated versus untreated groups of subjects. There are relatively fewer single-subject studies in the social skills training literature in learning disabilities than for children or youth with behavioral or emotional disorders … Even if more single-subject studies were available, it is not entirely clear that an ES obtained in group studies may be reliably combined or even compared with an ES obtained from single-subject data.

Revisiting the issue eight years later, Gresham (2004), discussing the relatively large effect sizes reported by Kratchowill and Stoiber (2000) wrote:

…it does not necessarily follow that the same large effects would be observed with similar problems occurring in school settings. That is, in interpreting and applying research literature to interventions, one must distinguish between efficacy and effectiveness. Efficacy refers to randomized, controlled and systematic evaluation of interventions under tight experimental conditions with the clinical trial being the prototypical example. Effectiveness, on the other hand, focuses on the application and generalizability of intervention methods in "real world" settings. In short, efficacy research emphasizes internal validity (controlled conditions with specific populations) and effectiveness research emphasizes external validity (generalizability of findings to other population under less-controlled conditions). It is therefore possible for an intervention to have efficacy evidence but not effectiveness evidence (p. 328).

Ultimately, educators of children who suffer from EBD (Emotional and Behavioral Disorders) are charged with finding ways to improve the quality of life of those children. We can diligently employ the best clinical, research based interventions yet continue to observe inappropriate behaviors when the child is returned to a naturalistic environment which presents unfamiliar stimuli and situations. It is here that we must change the focus back to the practical, functional application of social skills -– what can be termed social competence -- in the social context relevant to that child at that time. We know that there are myriad factors which cannot be controlled by the school. Our job is to improve the things we can improve, building with the tools and materials we have at hand.

Nowicki (2003) observed that social competence is a construct with two interacting components: (a) social skills as perceived by peers, and (b) self-perceptions of social ability. Gresham (2004), discussing the social validation of social skills training, suggested the use of "*behavioral markers that …are associated with consumer satisfaction or rejection of a behavioral intervention*" (p. 338). Direct consumers of social skills training are students, peers, and teachers. There are important similarities and differences in their perceptions of the effects of social skills training. In particular, the subjective perception of the effects of social skills training is at odds with quantitative measures. Tables 3 – 6 below, adapted from Kavale and Mostert (2004) summarize these similarities and differences. Kavale and Mostert employ statistical "power" ratings developed by Cohen (1988).

Table 3

Effects of Social Skills Training Observed by Different Raters

Rater	Mean ES	Standard Error of ES	Number of ES	Percentile Equivalent	Power Rating
Self	.244	.063	117	59	Small
Peers	.205	.064	138	58	Small
Teachers	.163	.091	73	56	Small

Table 4

Effects of Social Skills Training on the Self-Evaluations of Students with Specific Learning Disability

Component Skill	Mean ES	Standard Error of ES	Number of ES	Percentile Equivalent	Power Rating
Social Status	.379	.126	16	65	Medium
Self-Concept	.280	.128	24	61	Small
Social Problem Solving	.279	.210	11	61	Small
Social Competence	.265	.088	30	61	Small
Interaction	.188	.125	17	58	Small
Attribution	.079	.173	19	53	Small

Students, as a group, tended to report the greatest satisfaction with social skills training. Kavale and Mostert (2004) reported that nearly 60% of students who had received social skills training thought it to be beneficial, 65% perceived enhanced social status, and more than 60% believed that social skills training had improved their social competence, social problem-solving, and self confidence. This perception of efficacy is virtually identical to the student-perceived benefits reported by Forness and Kavale (1996). Kavale and Mostert concluded that "*…it may be possible to increase awareness of one's own characteristics and to improve feelings of self-worth*" (p.35). They also noted that social skills training did not seem to increase social interaction and that the students who had received training continued to experience isolation from their peers. Nowicki (2003) noted that students with learning disabilities considered their own social competence to be equal to their higher-achieving classmates, but offered the caveat:

"*…students with learning disabilities seem to be rather oblivious to their poor social acceptance by their peers*" (p.185). In this study, it would appear that those children who had received treatment perceived an increase in their own social status which was not shared by their teachers or their peers.

Peers seem to rate the effects of social skills training as providing the greatest improvement in the area of communicative competence. As detailed in the table below, approximately 60% of treated students were seen by their peers as demonstrating better understanding of the dynamics of communication. Peers, although seeming to be more accepting of students with SLD who had received social skills training, still regarded students with SLD as having lower social status than themselves (Kavale & Mostert, 2004).

Table 5

Effects of Social Skills Training on Peer Evaluations of Students with Specific Learning Disability

Component Skill	Mean ES	Standard Error of ES	Number of ES	Percentile Equivalent	Power Rating
Communicative Competence	.250	.221	19	60	Small
Acceptance	.230	.062	25	59	Small
Cooperation	.222	.128	13	59	Small
Friendship	.217	.161	13	59	Small
Rejection	.202	.172	23	58	Small
Interaction	.198	.135	24	58	Small
Status	.126	.096	21	55	Small

Teachers saw adjustment as the most visible outcome of social skills training. As shown in the table below, Kavale and Mostert (2004) found that teachers rated improved adjustment in more than 60% of students who had received social skills training, and in general viewed behavioral measures as having improved. This teacher perception of improved behavior is critical. As Henricsson and Rydell (2004) reported: *"…when teachers identify children as posing problems as early as in the first year of school, positive relationships between the children and these important adults as well as a healthy self-image may be compromised*" (p.111). A poor teacher-student relationship, even though initiated by a student's antisocial behavior, can have a long term effect on a child's motivation and achievement. Kreil, Wiest, and Wong (1998) found that *"…teacher warmth and support… are also tied to students' motivation and performance*" (p.601), again demonstrating the social validation and practical significance of social skills training.

Table 6

Effects of Social Skills Training on Teacher Evaluations of Students with Specific Learning Disability

Component Skill	Mean ES	Standard Error of ES	Number of ES	Percentile Equivalent	Power Rating
Adjustment	.294	.184	15	62	Small
Dependency	.250	.244	10	60	Small
Conduct Disorder	.218	.207	8	59	Small
Interaction	.113	.074	17	54	Small
Hyperactivity	.074	.212	9	53	Small
Academic Competence	.049	.205	14	52	Small

Limitations and Implications for Future Research

I have included several meta-analyses in order to develop a larger perspective, but as is discussed above, these meta-analyses should be used with caution. It is tremendously difficult to design a study which isolates social skills as a single dependent variable. Social skills deficits rarely occur by themselves, but often manifest along with other cognitive or developmental deficits. The result is that when we attempt to quantitatively measure the effects of treatment, the answer does not actually fit the question, in part because of the multivariate nature of studying the behavior of real people in real social contexts.

Two issues which suggest further research are treatment fidelity and validity. Two meta-analyses coauthored by the same researcher (Forness & Kavale, 1996, Kavale and Mostert 2004) were consistent in their criticism of the design and delivery of behavioral interventions. The wide variability of test subjects, difficulty in isolating social skills training as the dependent variable, and inadequate monitoring of treatment integrity all suggest that findings from such meta-analyses, as well as the underlying studies chosen for analysis, may provide inaccurate or misleading information. In their own words: "Therefore, it may well be that social skills training works but that it could not be demonstrated with the intervention programs used" (Kavale and Mostert 2004, p.38).

Educators of students suffering from EBD should also view research results which purport "small" effect sizes with skepticism. Meta-analyses employ statistical methods in an effort to standardize study results and provide a meaningful basis for comparison. In statistical terms, an effect size of 0.211 is in fact considered small.

In relative terms, the ES of 0.211 indicates that the average student … would advance from the 50th percentile to the 58th percentile as a result of social skills training and would be better off than 58% of students receiving no such training (Kavale & Mostert, 2004, p. 34).

In human terms, this statistically small effect size may signify a considerable improvement in the quality of life of the student who has enjoyed that gain, what Lipsey and Wilson (1993) called practical significance. Moving from the 50th to the 58th percentile represents an improvement of 16%. In grading terms, a student who scored a 70% grade on a final exam who could improve his score by 16% -- to a total score of 81% -- would express a high degree of satisfaction, and feel that his effort to improve had been worthwhile. While an effect size of 0.211 is statistically small, it can make a large difference to that individual.

Modern society is far different from the one our parents knew as children. Society has become increasingly fragmented as modes of living have changed and economic realities have all but eliminated any semblance of the "extended family" in many communities. We have become socially disconnected from one another, and interact with each other in real social contexts far less frequently than even a generation ago. Children learn to act appropriately in social settings by experiencing them. The disconnection and fragmentation of modern society does little to foster and much to inhibit socialization growth. Schools have become the de facto community for many children, and we should research ways to create "ownership" for all of the children we serve, to ensure that all children have the opportunity to claim school as a place of safety and growth. Research on the value and effect of play for very young children could shed light on the socialization value of this important aspect of childhood. It is possible that we may also need research on how best to teach parents how to play with their children, since it is likely that a significant number of new parents have little or no intuitive or experiential knowledge of this subject.

Finally, educational research should serve the greater good of improving teaching and learning. Teaching and learning are interactive, dualistic processes that change both the learner and the teacher. While this paper has identified behavioral interventions for children, it has not addressed behavioral interventions for teachers of children with EBD. Inclusive education means that more children with a greater range of behavioral issues will be part of the general education classroom more of the time. General education teachers need extensive, research-based training about how to change their own behaviors to be more effective as teachers of these students. More research on how best to employ Functional Behavior Analysis, as well as research to discover effective teaching techniques to provide Positive Behavioral Supports in the general education classroom will be needed. Also needed is more focused research in area of teacher-student relations, to help teachers understand that what they do behaviorally can make a tremendous difference to a child's success or failure.

Conclusion

Teachers, school administrators, students, and parents all have different views of the value of social skills training and its effects, as well as divergent views as to how those effects might be measured. Adults in schools will look to the immediate, practical aspects of social skills training: success in the school environment, what Hawkins (1991) termed habilitative validity. In light of the fact the many children are referred for behavioral interventions after problem behaviors have become habitual and chronic, we must recognize that the child's response to intervention will manifest itself in a range of behaviors along a continuum; the behaviors should show that the child has moved to a functional range of performance from a dysfunctional one, but will probably not be uniform across a given population. Success might mean high school graduation for some children. For others, it may mean spending a portion of the school day with socially competent peers in a general education setting. For others still, it may mean avoiding or delaying entry (or reentry) into the criminal justice system.

We know numerous factors that contribute to social skills deficits, and have identified many child protective factors that may mitigate the effects of those risk factors. As we attempt to measure the effectiveness of our intervention efforts, we should ask the following questions:

- Do the results have social validity?
- Do the results have habilitative validity?
- Do the results have practical significance?
- Are our expectations for behavior sensitive to developmental norms?
- Have we monitored the fidelity of treatment?
- Does the child display generalization?
- Has the child had sufficient opportunity to practice skills in a relevant context with socially competent peers?
- Have our efforts made a difference in the quality of life of that child?

Special Education treats each child as an individual, with individual needs and abilities. Our treatment of children with EBD demands no less.

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