

JAASEP

JOURNAL OF THE AMERICAN ACADEMY *of* SPECIAL EDUCATION PROFESSIONALS



SUMMER, 2006



JOURNAL of the AMERICAN ACADEMY of SPECIAL EDUCATION PROFESSIONALS (JAASEP)

Summer, 2006

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**JOURNAL of the
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*The Perspectives and Assumptions of Pupil Appraisal Professionals in the Identification Process
for Students with Behavioral Concerns*

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Researchers have long been disconcerted with the lack of a clear definition and objective criteria in identifying students with behavior problems (Center for Effective Collaboration and Practice, 1999; Forness & Kavale, 2000). As a safeguard, federal and state laws mandate the use of multidisciplinary teams to “reduce the inappropriate and discriminatory referral and placement of students into special education” (Knotek, 2003, p. 2). It is this team that makes the decisions throughout the formal identification process; “...no single procedure is used as the sole criterion for determining whether a student is a student with an exceptionality” (Louisiana Department of Education, 2000, p. 23). However, the safeguard is not fail-safe. Tensions may arise when there are opposing viewpoints, divergent interpretations of events or circumstances, and, in particular, competing philosophical orientations among team members.

Professionals, whether consciously or subconsciously, use their philosophical perspective as a basis for their general understanding of an exceptionality and their opinion of the method of identification. With regard to the classification of Emotional Disturbance (ED), some view this condition as pathological, having universal characteristics, i.e., exists within the student. They are comfortable basing the identification of ED on quantifiable instruments such as standardized rating scales and objective measures. Others view the characteristics and definition of ED as specific to an environment or culture that changes over time. They may believe that the environment, in fact, influences the behavior problems students exhibit. To them, the identification process includes activities such as interviews with family members to learn about the student’s behavior at home and in relation to peers and neighborhood friends. At times they also use norm-referenced activities such as classroom observations in an effort to compare the student to peers. Then there are those professionals who believe that too many students receive the ED classification. They tend to blame the entire educational organization and its inability to address the needs of all students in general education. These individuals view labeling and the stratification system as a way society marginalizes or oppresses certain groups. They value diversity and maintain the importance of treating individuals as unique. So, while some team members question the reality of a condition known as Emotional Disturbance, others appear comfortable in the belief that there is such a condition and concentrate on developing the most effective way to identify it. These various philosophical orientations provide the framework for this article.

Theoretical Framework

Skrtic (1991) describes three dominant philosophies as a way to deconstruct or analyze special education. He uses the traditions of objectivism, subjectivism, and critical pragmatism. According to Skrtic, an objectivist sees reality as definable, objective, and having universal characteristics. Objectivists study reality to determine regularities and causal relationships that can then be used to control, order, and/or predict outcomes. As a result of this knowledge,

society operates more efficiently and progresses. The methods used to investigate reality are those associated with empirical science, e.g., data, neutral observers, quantifiable descriptors.

The subjective tradition, as the name implies, views reality as subjective and created through people's interaction with the environment. Language and symbols serve to describe, understand, and negotiate reality. Knowledge of reality, according to the subjective tradition, continually evolves and is best understood from the perspective of a person at a particular place in time. However, groups of people can also have a collective understanding of reality (consensual reality). People interact within the environment and do not attempt to control it. Norms are developed to describe the immediate environment. Methods of investigation used in the subjective realm are often qualitative in nature and seek to describe ways people construct their reality (Guba, 1990; Ferguson & Ferguson, 1995).

The third tradition according to Skrtic (1991) is critical pragmatism, a denial of the existence of an objective reality. According to the critical pragmatists, reality is based rather on the values of the powerful and influential members of society. People's reality is limited by their conditioning and history. Their knowledge of reality is gained by examining the myths, values, behavior, and language learned by mass culture (Shor & Freire, 1987) and by continually questioning the economic and social forces that keep these existing values, practices, or institutions in place (Skrtic, 1991). Methods such as critical reflection (the analysis of professional practice) and action research (on-going research intended to shape practice) are methods used to uncover the forces in society that influence values, practices, and institutions.

Theory Applied to Practice

Coleman, Sanders, and Cross (1997) use a similar framework to tie philosophical traditions to the identification process of students who are exceptional. Though they use the exceptionality of Gifted to discuss this process, an easy transition to students with Emotional Disturbance is quite possible. Both of these exceptionalities or classifications fall outside the norm of the school population. Therefore, it is possible to ask the same kinds of questions of each: What does it mean to be Gifted? What does it mean to be classified with Emotional Disturbance? Likewise, educators adopt certain ways of identifying both exceptionalities: How is giftedness determined? Or how is Emotional Disturbance determined?

Coleman et al. (1997) use different terms to frame their theory, but, in effect, reflect the essence of Skrtic's three traditions: empirical/analytic for objectivism, interpretive for subjectivism, and transformative for critical pragmatism. They refer to a "mode of inquiry" as a way to discuss the principal approach a person uses when considering what an exceptionality means and the method of choice to identify a student with an exceptionality. Coleman et al. recognize that people may not consciously be aware of their mode of operation. In fact, the philosophical orientation from which they operate often becomes part of their tacit assumptions; tacit assumptions that are taken for granted, rarely questioned, and often presumed to be shared by others.

The first "mode of inquiry" which may become entrenched in a person's tacit assumptions is the empirical-analytic. This mode claims laws are universal and can provide proof of what is true or false and uncover cause and effect relationships which aid in the process of making predictions. An exceptionality can be defined and measured. Objective methods are used in the investigative process, and standardized instruments can be used to identify these students. Emphasis is placed

on accuracy in the identification process and, as a result, efforts are continually made to develop better instruments and reduce errors.

According to the interpretative mode, knowledge is gained by understanding how others see the world. Interpretivists seek to understand how people or groups view order or patterns in their relationships. People who operate from this mode of inquiry understand that people who are exceptional demonstrate abilities falling outside the norm in certain areas at certain times. Assessment practices, including evaluations, are not static and can vary according to change in circumstances and/or participants, e.g., measurement is determined by local school district. Furthermore, methods used to identify students are not limited to formal measurements and may include portfolios, observations, and informal tests.

The final model of inquiry presented by Coleman et al. is the transformative mode. Knowledge, according to this view, is “embedded in a cultural matrix of values” (Coleman et al., p. 107). That is, our way of knowing and investigating is wrapped up in the “power” relationships that involve struggles emerging from differences of gender, race, social class, and culture. According to this mode of inquiry, the influential in society not only determine the parameters of what is acceptable, they marginalize those who fall outside the dominant way of thinking. It is, therefore, important to identify these relationships and the ways people marginalize or are themselves marginalized. These realizations facilitate personal transformations and serve to help others in this same process. According to the transformative mode, standardized tests should not be used in an evaluation process since the nature of standardization depends on characteristics that have been valued by the dominant society and reinforced over time.

The purpose of this study is to describe the perspectives and underlying assumptions of Pupil Appraisal (PA) Professionals (i.e., education diagnosticians, certified school psychologists, qualified school social workers) at key decision points in the identification process for students with behavior problems (pre-referral and eligibility determination). The study attempts to understand the lived experiences (how people react and interact) of the evaluators as they are involved in this identification process.

Webster’s Dictionary provides the source of the definitions for perspective and assumption used in this article. Perspective is the “evaluation of events according to a particular way of looking at them, *historical perspective*;” assumption is the “supposition that something is true; a fact or statement taken for granted.” Key decision points refer to those determinations occurring at the pre-referral and eligibility determination level. The first key decision point transpires after the pre-referral information has been gathered, and the pre-referral team or School Building Level Committee (SBLC) meets to make a recommendation whether or not to proceed with the evaluation. The second key decision point occurs when all components for the individual evaluation have been completed, and the multidisciplinary team meets to determine the eligibility for special education. These team decisions are guided by the Pupil Appraisal (PA) Handbook, a state policy document that mandates the definitions, criteria, screening and evaluation procedures for the identification of students with disabilities.

Classifications in the Pupil Appraisal Handbook, however, sometimes include definitions and criteria with language that is relative and vague, particularly in the case of the ED classification. Ambiguous language in the ED definition and criteria such as “extended period of time,” “appropriate,” and “severe” is open to professional judgment. In addition, although specific

standardized test scores or medical diagnoses greatly assist in the determination of other classifications, the Emotional Disturbance label does not have the support of “hard evidence” or the requirement for certain scores on standardized tests. Thus the perspectives and assumptions of PA Professionals have the potential of playing a significant role in accepting students with behavior problems into the evaluation process at SBLC as well as later when the determining if the student qualifies for an exceptionality.

Method

Participants

Site Selection

Convenience sampling was used to select two sites for this study. These sites were chosen because of proximity and the interest of administrators. One site was an urban school district with more than 60,000 students and a Pupil Appraisal staff of more than 70 PA Professionals (Louisiana Department of Education, 2001). The other was a rural school district with approximately 10,000 students and a Pupil Appraisal staff of fewer than 25 appraisal professionals (Louisiana Department of Education, 2001).

Participant Criteria

Purposeful sampling, according to Maxwell (1996)

is the deliberate selection of particular informants who can provide important information that others could not. Since, the study involved decisions made at the pre-referral meeting of the School Building Level Committee (SBLC) and the Eligibility Determination meeting, participants who actively participated at both of these key decision points when students with behavior problems were discussed were targeted. Though it is recognized that teachers, parents, and administrators play significant roles in referring students to SBLC, it is the PA Professionals on the team who have the responsibility of ultimately determining the eligibility for special education services. This study, therefore, concentrates on the perceptions of these professionals.

Following the approval of administrators in both school districts, letters were sent to all PA Professionals introducing the principal investigator, describing the details of the project, listing the possible participation benefits and requesting participation. Ultimately, twelve PA Professionals involved in the identification process for Emotional Disturbance volunteered to provide an in-depth examination of their practices. A deliberate attempt was made to recruit an equal distribution from each PA discipline. Therefore, in the urban district three specialists from each profession--school psychologist, educational diagnostician, and social worker-- were recruited, and in the rural school district, one person was recruited from each of the three disciplines.

Interviews

Appraisal professionals were interviewed using a semi-structured interview format (see Appendix A). Initially, in a pilot study, observations were used to gather information on perceptions of PA Professionals. This method, however, proved inadequate and inefficient because of difficulties gathering in-depth information and scheduling, using interviews allayed these concerns. Questions were posed to elicit opinions on issues surrounding referrals and

evaluations within the identification process. Interviews lasted approximately sixty to ninety minutes. Each participant then received a summary of his/her interview for verification. Furthermore, ten of the professionals agreed to participate in follow-up interviews for further clarification and elaboration.

Field Notes

Maxwell (1996) speaks of the merits of incorporating the practice of regularly writing memos about the research process (e.g., ideas, hypothesis, categories, observations). Notes were maintained on the interview process regarding both technical (e.g., outlets, integrity of audio equipment) and logistical (e.g., setting, availability of water and snacks) concerns. Methodological issues were also documented such as times when participants strayed from the topic, effectiveness of certain probes, the need to clarify questions and researcher subjectivity. Extensive notes regarding analysis were maintained following analysis of the transcript and conversations with external reviewers.

Data Analysis

Data analysis involved data reduction, data displays, and conclusion drawing. The first procedure, data reduction, involved analyzing verbatim transcriptions and identifying meaningful units or codes found in the words and actions of the participants in the study as they related to the research question. Later, these passages or data chunks were examined to determine even more distinct patterns/themes as a base for larger categories of meaning.

Data was then visually displayed according to three broad themes: student, environment, and system. Each theme was divided into the two key points of decision: SBLC and Eligibility Determination. Passages from transcripts were cut and pasted on charts under each of these key decision point and tagged according to the specific discipline headings: educational diagnostician, school psychologist, and social worker.

This visual display greatly assisted in designing conceptual maps, drawing conclusions and identifying the underlying assumptions that were suggested by participants' comments. These assumptions were later used to form the perspectives that served to answer the research question.

Confirmability

Marshall and Rossman (1989) and Glesne (1998) suggest a number of ways to address an over-interference of researcher's bias or subjectivity. Some of these ways include the use of external reviewers, member checks, and triangulation.

External Reviewer

Two researchers served as external reviewers for this study. These experts asked critical questions, verified or disputed themes/patterns, and proposed alternative hypotheses. Meetings were held following the first, eighth, and last interview. Conversations occurred in the room with the data analysis. Both external reviewers critiqued the written report of the results.

Member Checks

Each person interviewed received a written summary of the main points of his/her individual interview for review and verification. All respondents confirmed or clarified information from the summaries. The first three people interviewed took time to further elaborate on their original interviews.

Triangulation

Janesick (1998) lists data sources as a type of triangulation. This study used a variety of data sources, that is, multiple participants with varying points of view. Twelve participants confirmed and/or contradicted what others said and what the researcher believed. Bias was held in check by the differing points of view of these various participants.

Results

Various terminology has been used to describe methodological approaches to deconstruct or analyze education (Skrtic, 1991; Borlund, 1990, Guba, 1990). However, for the purpose of discussion, results are organized according to the three broad perspectives outlined by Coleman et al: Empirical-analytic, Interpretive, and Transformative. Although it is impossible to precisely compartmentalize or assign rigid, definitive boundaries for each of these perspectives they should be viewed as fluid rather than static boundaries: one shades off another. Perspectives and assumptions regarding the identification process are embedded in the PA Professionals' accounts of their experiences. Attentive listening can tease these out; critical analysis can categorize them.

Each section begins with a brief description of each perspective and the assumptions it entails regarding the ED definition and classification criteria. The information gleaned from the interviews with the PA Professionals is used to illustrate each perspective. To give the reader some sense of who is speaking, codes and numbers are assigned according to professions and the order in which they were interviewed. For example, "P" represents psychologists; "E" represents educational diagnosticians, and "S" represents social workers. And P1 represents the first psychologist interviewed, P2 the second psychologist, and so on. Each section ends with a discussion of the factors that study participants acknowledged are important to them at key decision points in the identification process.

Empirical-Analytic

Coleman, Sanders, and Cross (1997) use the term, "empirical-analytic," borrowed from Popkewitz (1984), to describe a perspective that suggests that social reality is definable and objective with universally recognizable characteristics. In addition, according to this perspective, reality exists whether people are aware of it or not. Therefore, in order to learn more about reality, followers of this perspective search to uncover new knowledge and strive to perfect existing knowledge. One of the ways they refine existing knowledge is to seek out cause-and-effect relationships. They believe that these causal relationships lead to a better understanding of how to control and/or predict social reality.

How does the empirical-analytic perspective relate to PA Professionals and the identification process for students with behavior problems? The answer to this question is framed by outlining two main assumptions that relate to the nature of Emotional Disturbance and the way Emotional Disturbance is identified.

Assumption 1: There are students who have a condition known as Emotional Disturbance.

There are two kinds...of true Emotional Disturbance; Those kids who may hear voices, cry a lot, or can't function within the education setting...on high doses of medicine or could be

schizophrenic...This one I think is more behavioral; his is more outbursts and not wanting to comply with the teacher demands, acting impulsively and not thinking about the end. (E4)

The state definition of Emotional Disturbance contained in The Pupil Appraisal (PA) Handbook describes students whose identification can be based on generalized behaviors or on the definition found in the Diagnostic and Statistical Manual (DSM). The generalized definition addresses behavior that is so different from the “appropriate age, cultural, or ethnic norm”, that it affects performance, and is “consistently exhibited in two different settings”. A diagnosis based on the DSM must indicate a “severe mental disorder”.

The appraisal professionals in this study described both of these behavioral conditions. E2 describes an image of a generalized condition,

[He] had all kinds of problem behaviors, walking out of school, fighting, cursing out the teacher, cursing out his family, just being real mean to his siblings...and it extended to the community.

P1 describes a student who she thought had schizophrenia, a diagnosis associated with a DSM classification,

...She was having hallucinations, and she'd just laugh. Those are the easy [children to identify]...where you have a child who is behaving with hallucinations.

Findings suggest that appraisal professionals believe that there is a condition that can be defined as Emotional Disturbance. Appraisal professionals also recognize characteristics and identify the criteria used in the identification process.

Assumption 2: There are Reliable Criteria on which to base the Identification of Students with Emotional Disturbance.

The Pupil Appraisal Handbook that mandates the procedures and criteria for the identification of a student with emotional problems also includes a diagnosis of a severe mental disorder based on the criteria found in the Diagnostic Statistics Manual (DSM). Participants presented opinions on both the PA Handbook and DSM.

One participant indicated that the PA Handbook, “provided structure to the process;” another considered it as “a general guideline,” and yet another viewed it as a “flow chart” of the necessary steps and components. P3 spoke of the merits of the Handbook,

It's easy enough to go through the evaluation and complete the steps. If they all add up and you can go to the diagnostic manual, [PA Handbook] and determine...he's emotionally disturbed. And later this same psychologist (P3) stated,

If they fit the characteristics they're in. I don't have any choice on that. If I have evaluated a kid and I see the characteristics of an emotionally disturbed kid and it's interfering with their educational performance and that of others. I mean they're in. I might not like it but there's no alternative.

Ten of the 12 professionals made reference to diagnoses found in the DSM. Some spoke of existing conditions of “schizophrenia”, “depression”, and “selective mutism.” Three participants welcomed the involvement of the psychiatric profession. Two reported that a DSM diagnosis

facilitated for or provided the direction in the identification of Emotional Disturbance. S1 told how the psychiatric report was used as the basis for the decision at SBLC, “ We already had the completed evaluation [psychiatric]...So I mean it was ready, right there. We had everything we needed.” When asked if the student was then immediately referred for an evaluation and participant replied, “With a child with that kind of diagnosis?” [Of course, the youngster was referred for an evaluation.]. E1 used the psychiatric report to provide direction for SBLC,

I tried to get the mother and father to consider having them [their children] seen by a psychiatrist or a medical doctor...If I don't have anything from a psychiatrist or a medical doctor now [at SBLC meeting] and they [SBLC] haven't made any effort to get any of that...now, where am I going with this [referral]?

This same PA Professional emphasized the relationship of DSM categories and Emotional Disturbance, “To me ED [Emotional Disturbance] is something that is psychiatrically...diagnosed.”

All 12 PA Professionals are required to use the pre-determined criteria found in the PA Handbook. However, there are varying levels of satisfaction when it comes to this document. Some acknowledged the importance or validity of some procedures and criteria; while other participants voiced its inadequacy. We now focus attention on the factors that study participants acknowledged were important to them at both the SBLC and Eligibility Determination levels – factors that again reflect the Empirical-Analytic Perspective.

Key factors in decision-making at SBLC

All 12 participants indicated that criteria existed that could be used to identify students with Emotional Disturbance. However, appraisal professionals suggested that at the SBLC level two types of interventions were given more attention than others: medication and documentation of implemented interventions.

Medication as an intervention

Nine professionals referred to discussions at SBLC meetings that involved the use of medication, with the implication that the youngster had a pathological condition that could be remedied with medicine. E1 at an SBLC meeting asked if a doctor had prescribed medication for the student. This question was answered with, “He was given medication all the time, but it didn't do any good.” P3 hoped that the student's behavior would improve as a result of medication, “Let's see if medication would help him, so we don't have to label him and put him in a special education classroom.” P3 also spoke of experiences with students where medication had been prescribed, “...If it works, it's quick.”

It appears for these nine professionals that, if in fact the medication alleviates the behavior problem, the decision was made not to refer the student for an evaluation. If however, medication was not prescribed or if it was prescribed with no noticeable change in the behavior, then the decision was made to refer the student for a full evaluation.

Documented interventions

All 12 professionals referred to interventions as necessary activities in the pre-referral process. Some participants used the results of these interventions to decide if the student needed to be referred for an evaluation: they assumed that if a student was able to change a behavior, then in

all likelihood, this student probably did not have an Emotional Disturbance. P4 believed that, “The intervention is to look at if this child is learning like a handicapped student or not. It is not to remediate him...if he responds to the intervention, then, no, he is not a special ed candidate.” E4 developed a systematic way to conduct objective and measurable interventions,

When the teacher comes to the SBLC and say, “We are going to do a support system for behaviors.” We will ask them to define what that behavior is. What does aggressive mean? Is he hitting; is he spitting; is he kicking? What behaviors are the most problematic for you in the classroom? Once we determine what the problematic behaviors are, and the frequency of them, then an intervention is developed. We’ll ask the teacher to chart it. And then we’ll go in weekly and see how they are doing, and chart it, and then graph it to see if they responded to the intervention.

This example indicates the precision with which interventions are designed. For these five PA Professionals, the interventions and the terms used to describe the behaviors are objective, measurable, and verifiable.

These two factors appeared important for PA Professionals when making decisions at SBLC: medication and interventions. Five PA Professionals in particular, emphasized the importance of calculable interventions. The next key decision point, “Eligibility Determination,” reflects many of these same considerations.

Key factors in decision-making at Eligibility Determination

Five PA Professionals emphasized the need for multiple sources of data at the Eligibility Determination level. Five of these participants actually did more than what was minimally required by the Handbook. E3 relied on information from numerous sources to help in determining eligibility for special education services, “You really think you have to gather a lot of data and look at multi sources of data, not one or two pieces of data.” E4 listed the data she considered important such as:

...observations, teacher interview, parent interviews, behavioral scales. [The School Psychologist] and I look at where the behaviors precipitated where it happens most often. Is it structured/unstructured? What are his academic levels? Is it the academic work we are really looking at? I am really not sure at this point until we go in and do observations or interviews, until I can do some informal testing, some standardized testing, some curriculum based, to see if the curriculum is too hard for him.

The second assumption of the Empirical-Analytic Perspective focuses on the existence of criteria that can be used to identify students with Emotional Disturbance. Respondents suggested that the PA Handbook and the DSM could be used to determine this exceptionality. Furthermore, the PA Handbook lists the certain activities and components that are required at the pre-referral and eligibility determination levels. Though all PA Professionals satisfy these requirements, some factors are given special consideration such as medication and interventions at the SBLC level, and multiple sources of data at “Eligibility Determination.”

Interpretive Perspective

The interpretive perspective acknowledges the importance of the interaction of people and their environment. In this perspective, reality is subjective and shaped by individuals and groups as

they seek to understand it. Language, signs, and symbols are used to describe, interpret and negotiate reality. The following two assumptions inherent in this perspective, once again, concentrate on the nature of Emotional Disturbance and the way it can be identified.

Assumption 1: There are Students who have a Condition known as Emotional Disturbance that Results from the Student's Interaction with his/her Environment.

The first assumption is the crux of the ecological or Interpretive Perspective: students have behavior problems that point to the influence of home, school, and/or community situations. All of the 12 professionals, to some extent, acknowledged the influence of the environment on student behavior.

Seven PA professionals, in particular, strongly emphasized the influence of environment. S3 expressed her opinion on the relationship between the youngster's behavior and the home environment in this way:

With all family problems, the instability in the home and the child exposed to that all day...And then he comes to school and he's expected to sit still and do his work...When you know that, what's at home is not resolved, and he has to deal with this every day.

S2 told me of a situation in which a student lived with his Grandmother but really wanted to be with his mother. The Grandmother complained of his "disturbed" behavior. This participant presented an alternate interpretation for this youngster's behavior,

...behavior that you would expect from a child who had been through what he had experienced, not knowing whether he was always going to be with the Grandmother...or if his Mother was going to take him, because sometimes she would take him for a visit. He didn't know how long it would last, when he would see her again. That can contribute to a child not being able to concentrate in school.

These professionals believed that it is the environment that contributes, perhaps even in a decisive way, to the students' behavioral difficulties. They juxtaposed home environmental issues with expectations at school.

Assumption 2: The Criteria used to Identify Emotional Disturbance are Problematic.

Respondents raised two essential considerations that influenced them at the pre-referral and eligibility determination: the vague language of the Handbook, and the impact on the student once the label Emotional Disturbance was assigned.

Problematic language in the PA Handbook

As previously stated, the PA Handbook defines Emotional Disturbance and the criteria and procedures used to identify it. All twelve participants made references to the language of this Handbook. Four PA Professionals admitted that terms such as, "socially maladjusted," "severity," and "appropriate" were vague. This ambiguous language generated three topics of conversation: "working" definitions of terms, opportunities to use professional judgment, and possibility of misidentification of students.

The individual PA Professionals incorporated their own terms to interpret the ambiguous language of the PA Handbook. According to four PA Professionals, "severe," behaviors were

synonymous with terms such as “malicious,” “very disruptive,” and “shows no remorse.” P3’s “working” definition involved the differentiation between a student who “...can’t behave himself or won’t behave himself.” The implication was that if the students “can’t” behave themselves then they had Emotional Disturbance. Three other PA Professionals assumed that if students behaved a certain way just to get attention then they probably did not have an Emotional Disturbance. E2 explained, “His behaviors were more geared to getting the teacher’s attention. You know a lot of ED kids when they’re doing something, they’re not even aware of who’s around and what’s around. They’re just acting up.”

Three of the twelve professionals actually appreciated the fact that the Handbook contained terms that were vague as it allowed them to use professional judgment. E4, in speaking about the PA Handbook stated,

It shows you what you need to address, the general overview of everything that you need to cover in your report. It gives you some leeway also... to make professional judgment...you have all the data to support a classification, and, in your professional judgment, this child should have this classification or not; then you use it.

Two professionals addressed the problem of misidentification that results from language in the definition and criteria that is vague and arbitrary. P2 worried that, “...a child can be written to fit into the label.” S2 was troubled by PA Professionals who read the definition and criteria for the exceptionality and then go in search of those behaviors, “But, I think, too often we find what the Handbook says.”

The following discussion illustrates the three opinions posited by the PA Professionals regarding the language of the Handbook: the need for further refinement and interpretation, the advantage of the opportunity to use professional judgment, and the fear of identifying a student wrongly.

The label of Emotional Disturbance

All 12 participants spoke of the negative effects of the ED label. Some, however, were more adamant than others; they considered the negative consequences at Eligibility Determination. They used terms such as, “agonize,” “take it seriously,” and “cautious,” to describe the decision-making process. Some professionals described the label as a “life-sentence,” “death sentence,” “red-flag,” “red alert,” and “stigma”. Terms used for the special education placements were equally negative: “prison setting,” “hold-down facility,” “juvenile jail,” and “crazy class.” S3 voiced her objection to the label of Emotional Disturbance:

This is a child who’s been identified as somebody with problems and un-teachable. This child can’t perform socially and is not allowed to participate in activities that other kids participate in...The child goes through school, graduates, and this is still on his record even though...after graduation there are no services to prepare this child for living in society. Now, he’s on the street. Where does he go? And for an ED kid, let’s say he gets into trouble...We hear he’s been emotionally disturbed all of his life...the label stays with them. If they go for employment and somebody finds out they’ve been labeled Emotionally Disturbed. How does this affect employment? So the long [term] effects of these classifications [are] something that I’ve been struggling with for years.

When asked about how her attitude regarding the label influenced the daily practices involved in the identification process, she replied as follows:

It did when I first started...I had a hard time writing ED evaluations. I hated to have a kid come to the table with behavior problems. Over the years when I've seen how disruptive that is for the regular class and how that can affect the child who is having the problem...It affects their self esteem. So, I was trying to determine what's the lesser of two evils. Do we label them and put them in a situation where they can find some sense of acceptance and achievement? Or do we keep them in a setting we know that they're going to be the ones identified with the problem. That's something I've been struggling with...

These professional raised issues that others expressed as well. These professionals were cautious about assigning the label Emotional Disturbance. They worried that this label had implications that affected students' instructional programs, long-term outcomes, and the way they were perceived by others. Thus respondents suggested that language created problems for them throughout the identification process.

Key factors in decision-making at SBLC

All participants indicated that the home and school situations influenced both the students' behaviors and the decisions made at SBLC. They also considered these environmental factors when suggesting interventions.

School environmental factors

Four professionals focused on the influence of teacher behavior on student behavior, in particular classroom management and unreasonable expectations for students. S2 offered an example of the classroom management problem of one teacher,

...The teacher was inexperienced also...A first-year teacher with a class of little problem children. He was still learning classroom management skills. They all seemed out of the ordinary to him.

In a case such as this, the professional attributed the problem to the teacher and not the student. Other professionals suspected that some students' behavior problems were related to the academic expectations the teacher imposed. P1 complained that teachers do not assess the academic skill levels of their students,

[A] teacher will say, 'She just doesn't get her work done. He just doesn't finish anything.' And amazingly much of the time the child has never been assessed to see where he or she is." Respondents claimed that teacher behaviors were often implicated as a critical contributor to student behavior problems.

Home environmental factors

Home environmental factors discussed by ten professionals, included problems created by exposure to models of unacceptable behavior as well as to lack of exposure to acceptable behaviors. Professionals also commented upon the effects of recent changes in a youngster's life such as traumatic events. P2 acknowledged the propensity of a child to model observed behaviors, "He was influenced by a brother in particular who had other behavior issues...he [student] would model some of that behavior from home." S3 provided an example involving a

child in kindergarten who had not had the opportunity to be socialized to the school environment,

This was his first exposure to school. And he's in a house with his grandparents, an uncle, his father. He has all these people that probably cater to him...He just has not been given the chance to mature...they won't even let him go on a field trip with the class unless one of them can go.

PA Professionals at SBLC mulled over numerous issues associated with a student's home environment. Their experiences suggested that exposure to appropriate and inappropriate behavior contributed to the student's behavior problems.

Interventions

Interventions, according to the PA Handbook, are a pre-referral requirement. The interventions, proposed by those who focused on environmental factors, often involved counseling. S4 conveyed that the advantage of counseling was that it provided an opportunity "...to work with that child individually, to help him cope with what's going on." S3 was confident that counseling might effect a change in the student's behavior to the point where an evaluation was not necessary,

Where there are a lot of family issues going on...it may not be just the kid's problem; it's the family dynamic going on too. With counseling, the behavior is improved to the point where it doesn't need to go into the evaluation.

The home and school environment, according to PA Professionals, played a pivotal role in the student's behavior as well as in decisions that were made at SBLC. Counseling was recommended as a way to change a student's behavior and his or her reaction to the environment.

Key factors in decision-making at Eligibility Determination

The seven participants who focused on environmental issues seemed to be caught in a dilemma. They were concerned about the ambiguity of the language in the Handbook and the negative effects of the label. However, they were still confronted with a student who exhibited considerable behavior problems. One option they considered was exploring qualifications for another exceptionality. The other option was to weigh the consequences of the youngster remaining in the present general education setting.

Other Exceptionalities

The number of PA Professionals who explored qualifications for other exceptionalities was not limited to the seven who focused on the influence of the environment; in fact, 11 out of 12 participants did so. There were three optional exceptionalities that were considered: Other Health Impairment (OHI), Specific Learning Disability (SLD), and Gifted (G/T). P1 rationalized, "I think OHI is a less stigmatizing exceptionality" while S1 considered OHI "much more benign" than Emotional Disturbance. A few respondents thought it would be better to try another exceptionality first to see if that would address the behavior problems. P2 reasoned, "The team decided we'd try the academic exceptionality first, which was [S]LD. We'd address that and supplement it with the counseling." Eleven PA Professionals investigated other exceptionalities when it appeared that students might fit the criteria.

Weighing the Consequences

All of the PA Professionals, even those who acknowledged significant environmental influence, indicated that there were times when the identification of this exceptionality was necessary. E1 who conceded that Emotional Disturbance was the only option opined, “You can’t take the kid out of the environment. So when you look at the situation where we are now, and what the child needed to do at this particular time in his life, he just cannot do it.” Another time a PA Professional, P3, deemed this exceptionality necessary was when the student was a danger to himself,

[He was] easily provoked and he provokes other people; he looks for problems, he looks for trouble, and he pushes everybody’s buttons until they start fighting, and then he fights back...He needs a smaller setting. It might save his life.

Three professionals mentioned the interruption of instructional time as another reason for labeling a student with Emotional Disturbance. This often happened when youngsters were suspended or expelled. S1 regretfully stated, “The only other alternative I find would be actually an ED class, unfortunately. For that child it’s almost a last resort because he’ll keep on getting expelled.”

And finally, three other professionals agreed that the ED classification was necessary when the youngster’s behavior was disruptive to other students. Two professionals who expressed this opinion stated “...just seeing how disruptive this is for the other children.” (E2) and “...it’s not fair to those other kids; so you kind of have to do something”(E1).

Professionals who practice from an Interpretive Perspective emphasized environmental issues. They focused on the interaction between youngsters and their environment. They also grappled with the language of the PA Handbook and how to translate it in their daily lives as appraisal specialists. Participants who were inclined to the Interpretive Perspective still conducted the required pre-referral activities and evaluation components. However, these procedures were not given nearly the emphasis as in the Empirical-Analytic Perspective.

Transformative Perspective

The Transformative Perspective, applied to an education system, analyzes both the values of people and the power relationships within that system. Skrtic (1991), a critic of the separate special education system, elucidates this perspective. He sees special education as a way of preventing the larger educational system from addressing the fact that schools are failing students. As it stands, the system’s response to students who have difficulty functioning in the regular class is to move them into special supplemental programs. Thus, rather than locating the pathology in the organization where it really belongs, the system locates it in the student.

Assumption 1: The Identification of the Condition known as Emotional Disturbance must be Understood in the Context of the Web of Power Relationships Surrounding Socioeconomic Class, Gender, Community Culture, Race, and Economic Parameters.

Observers of the Transformative Perspective seek to uncover how values implicit in organizations influence the practices of those organizations. Participants in this study considered values related to five social contexts: socioeconomic class, gender, community culture, race, and economic parameters.

Socioeconomic class

One way observers of the Transformative Perspective might view the concern surrounding students with problems is to examine the relationship between socioeconomic class and the educators' values. P1 presented her point of view on the relationship between socioeconomic factors and the identification process:

People who have money...their kids are not in those public schools...if they need services, they are able to go to a private psychiatrist where they do not become part of the public system....

In addition ...

An upper middle class [family] would never put up with the questions that we ask. They just wouldn't answer you. (laughs) Or they'd tell you very quickly, "It's just none of your business." Everything is kept within the family unit. Whereas, with the students we deal with, the parents don't have any choice.

Gender

Four PA Professionals acknowledged the role gender played in the identification process. P1 linked the way society socialized children to the identification of Emotional Disturbance:

Gender differences in our society are learned. Girls learn to behave in a certain way, and boys learn to behave in a certain way. Boys are pushed to be more aggressive than girls. And aggression is what gets kids in ED classes...

S3 recognized that behavior for boys is often developmentally appropriate and should not be construed as "bad". And finally, two participants thought that female teachers relate better to girls as they share certain "gendered" characteristics. E2 suggested, "that most of the teachers are female, and they might be able to relate better to children that are female."

Community culture

The Transformative Perspective is concerned with the struggle for domination between different cultures. P4 was conscious of the disparity that existed when cultures collide, that is, when behaviors are acceptable and even advisable in their community setting but not in the school setting. She described the dilemma that she often faced:

A lot of our kids that have behavioral problems...a lot of them are learned. They mouth off; they demonstrate inappropriate behaviors because that was learned...because they had trouble changing the expectations from home to school to community. Whenever I have an ED kid these days, I really walk the fence and I am not one that is quick to make judgments.

The implicit values of a youngster's home/community culture, are embedded in the youngster, and are demonstrated by the way he/she behaves. However, this only becomes a problem if the values of the home/community culture conflict with the values of the school culture in which he/she is expected to operate.

Race

Only one PA Professional, S3, expressed an opinion regarding how issues of race

relate to the identification process. She admitted that she was in the early stages of wrestling with this issue but willingly shared her opinion as follows:

The timing for special ed and the timing for integration...there seemed to be some correlation there...when black kids were put into white schools, all of a sudden they were considered unable to perform. They were told they couldn't perform.

This PA Professional is searching to uncover the relationship that she believes exists between the special education system and the abolition of segregation in schools. Though she admitted that she had not formally investigated this relationship, she had at least identified something that she believed needed to be uncovered in order to get at the root of the problem.

Economic parameters

Two issues surfaced during the interviews regarding the "matrix of values" evident in the school system. PA Professionals spoke of how behavior problems might be prevented if funding were available to reduce class size and provide needed resources for classroom teachers and their students. S1 explained her frustration,

...given what needs to be done and knowing the reality of the resources available...We can all go and say this is what needs to be done, but if the resources are not out there to help us accomplish these goals... the priorities are just a little bit skewed...

A second issue raised by one professional was how the priorities of administrators directly affect the way a system operates. As a result, both factors were blamed for teacher frustration, low tolerance for student differences, and eventual referral of students for special education services.

Assumption 2: The Criteria Used to Identify Emotional Disturbance are Related to Uncovering the Power Relationships in the System.

Followers of the Transformative Perspective analyze the various power relationships as a way to better understand their role in perpetuating these relationships. The way to such an analysis is through critical reflection. The professionals suggested various levels of engagement in the reflection process. Their comments centered around three relationships: their relation to the special education system, to the job of identification, and to other team members.

Relationship to the Special Education System

S3 willingly shared her opinion regarding her role as part of the special education system. She worried,

Statewide, nationwide, we're not doing a good job for our children with special needs...My role, I thought, was going to be helping. Now, I'm not sure if I'm not just contributing to the problem...the child is not going to get his needs met. Am I helping or am I hurting...that's my own professional dilemma.

Relationship to the job of identification

Five respondents pointed out, what they believed to be the subjective nature of the identification process. P4 explained,

I can say this from experience, that as a psychologist, if you put three of us together you will probably get three different opinions about the degree of the problem. There are kids that I know that I didn't qualify that another psychologist would have...It depends on the combination of the team and the evidence that is brought into it.

P3 assumed that everyone was aware of the subjectivity involved in both the diagnostic process used by psychiatrists and the identification process used by pupil appraisal,

If you look at that [DSM-IV], it's sometimes ambiguous...It's all up to interpretation. If you look at a psychiatric evaluation, you can look at five different ones of the same kid and you're going to come up with five different pictures because the evaluator is different...That's the only difference. The kid's the same, but who sees him is going to write up a different report. Now there might be some commonality but we're dealing with something we can't measure. We're dealing with a kid's mind, and emotions, and everything that makes up that kid and you can't measure that stuff. You can't take it out and look at it, tweak it and put it back in. It's subjective. E3 discussed the difficulties created by an identification process that does not use objective measures,

"ED" is a classification that is hard to standardize. I can give a test, and I can come up with a standard score, and I can say this child is MD or this child is LD. But because the evaluator... what they bring to the job in terms of what they do...their background, their life experiences can influence a person... their personality you know, just so many other factors. Because it's not a classification that is standardized.

PA Professionals presented their analysis regarding their relationship to the special education system, to the job of identification, and with other members of the multidisciplinary team. The Transformative Perspective involves uncovering the power relationships that exist in society, and for purposes of this study, in the educational system. The respondents provided evidence that PA Professionals ponder the power relationships involved in the process of assigning the label of Emotional Disturbance to students. Some PA Professionals recognized the role society plays in this process, and pointed to issues related to economics, gender, culture and economic parameters. Other participants recognized that the identification of students is very much affected by the perspectives and assumptions that individual PA Professionals bring to the table. This kind of reflection in some cases resulted in a new and deeper understanding of the PA Professional's own place and function within the system and a more thorough critique of the system as a whole.

Discussion

The appraisal professionals in this study did not operate on the basis of only one theoretical perspective in their actual practices. At times they based decisions on whether or not to identify a student with Emotional Disturbance on what they considered to be objective or unbiased measures. At other times, they considered the impact of the environment on the student's behavior and acknowledged its consequences. And yet at other times, they pondered the impact of the various inequities on the appraisal process existing in a school system. In fact, the appraisal professionals in this study operated from a combination of perspectives.

Not surprisingly, appraisal professionals frequently referenced facets of empirically-based models in their practices. One reason for this perspective is of course, their professional training. A long-standing and rarely disputed tradition exists for the study of empirical methods for evaluation. Current training programs for appraisal professionals focus almost exclusively on the quantitative model. Another reason the numerous references to empirical approaches were not surprising is the school system's assessment emphasis. Schools incorporate observable and measurable practices, i.e., high stakes testing. Many still believe the words of Thorndike (as cited in Custer, 1996), "Anything that exists exists in a certain quantity and can be measured."

However, despite prevailing hegemony, professionals do not operate exclusively from the Empirical-Analytic Perspective. Rather, participants referred to environmental factors as well. A mixture of assumptions from both the Empirical-Analytic and Interpretive Perspectives influenced participants' practices. Thus, strictly defining an absolute and impervious boundary between these two perspectives is problematic. Then there are those who believe that the nature of Emotional Disturbance cannot be reduced simply to the result of an inherent pathological condition, nor can it be solely based on the interaction of the child in the environment. It is far more complex than that. These people maintain that too much time has already been spent on debating the definitions and criteria for special education categories. Instead, it may be time to acknowledge that special education classifications are actually defined into existence by certain constituents (e.g., policy makers, administrators) within a system. This acknowledgement points to another controversial dimension of the special education system, one that has been referred to as the Transformative Perspective.

The Transformative Perspective scorns reality based on objective terms. Rather, followers of this perspective posit that reality reflects the predominant values of the powerful and influential people in society. Years of history and conditioning inculcate values on peoples' sense of reality and suppress the need for closer examination of these values. As a result, professionals, willingly or not, play a role in perpetuating the values of the existing special education system when they conduct the evaluations designed to place students in special education instructional programs. How they see their role in this process is dependent on any number or combination of factors both explicit and assumed. Professionals are called to examine their place in the existing "web of power relationships." This critical self-examination will serve as a way of "remaking ourselves as we think, act, write, read, and talk more about ourselves and our practices and discourses." (Skrtic, 1991, p.29)

Implications for Theory and Practice

The process of identification to determine whether or not a student receives a disability label is, indeed, a very serious matter. This study has implications for persons presently in the field of appraisal as well as those who plan to be.

Coleman, Sanders, & Cross (1997), Guba (1990), Skrtic (1991, 1995) are the voices in the literature that press us to grapple with our tacit assumptions, wrestle with paradigm shifts, and revolutionize the current education system. Their models provide a framework for, and a vehicle on which, to examine personal and professional practices. This study specifically affirms the need for PA Professionals to embark in critical examination of their professional practices. Realizations gained from this introspective process can empower professionals both individually and collectively to engage in contemplative actions. Professional organizations and Pupil Appraisal Departments should include seminars on critical reflection linked to theory and

practice. The result of these seminars might spawn core groups that tangle with issues relevant to their field as a responsible way of affecting practice. The intent of these groups would not be to find solutions to crisis situations but rather to grapple with the complex nature of on-going and evolving issues. Issues generated within groups of this nature should then be disseminated to other professionals (e.g., newsletters, journal articles, presentations) and policy makers (e.g., school/state education boards, professional organizations). Finally pre-service or certification courses for Educational Diagnosticians, School Social Workers, and School Psychologists could include exposure to, and examination of, the implications of the dominant worldviews.

Pupil Appraisal Professionals are called upon to examine issues from a variety of perspectives, uncover their tacit assumptions, and develop actions based on careful deliberations. It is through these actions that one can consciously commit to the process of becoming an ethically responsible professional.

References

- Borland, J. (1990). Post positivistic inquiry: Implication of the "New Philosophy of Science" for the field of the education of the gifted. *Gifted Child Quarterly*, 34, 61-67.
- Center for Effective Collaboration and Practice (1999). *Students with emotional disturbance*. Retrieved February 10th, 2000, from <http://www.air.org/resources/ntllegend.html>
- Coleman, L.J., Sanders, M.D., & Cross, T.L. (1997). Perennial debates and tacit assumptions in the education of gifted children. *Gifted Child Quarterly*, 41(3), 105-111.
- Custer, R. (1996). Qualitative research methodologies. *Journal of Industrial Teacher Education*, 34(2), 3-6.
- Ferguson, P.M., & Ferguson, D.L. (1995). The interpretivist view of special education and disability: The value of telling stories. In T. Skrtic (Ed.), *Disability and democracy: Reconstructing (special) education for postmodernity* (pp.104-121). New York: Teachers College Press.
- Forness, S., & Kavale, K. (2000). Emotional or behavior disorders: Background and current status of E/BD terminology and definition. *Behavior Disorders*, 25(3), 264-269.
- Glesne, C. (1998). *Becoming qualitative researchers: An introduction*. New York, NY: Longman.
- Guba, E. (1990). The alternative paradigm dialog. In E.G. Guba (Ed.), *The paradigm Dialog* (pp.17-27). Newbury Park, CA: Sage Publications.
- Janesick, V.J. (1998). The dance of qualitative research design: Metaphor, methodolatry, and meaning. In N. Denzin & Y. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 35-55). Thousand Oaks, CA: Sage Publications.
- Knotek, S. (2003). Bias in problem solving and the social process of student study teams. *The Journal of Special Education*, 37(1), 2-14.
- Louisiana Department of Education (2000). *The pupil appraisal handbook*. Louisiana Department of Education: Author.
- Marshall, C., & Rossman, G.B. (1989). *Designing qualitative research*. Newbury Park, CA: Sage.
- Maxwell, J. (1996). *Qualitative research design: An interactive approach*. Thousand Oaks, CA: Sage Publications.
- Popkewitz, T. (1984). *Paradigm and ideology in educational research: The social function of the intellectual*. London, England: Palmer.

- Shor, I., and Freire, P. (1987). *A pedagogy for liberation: Dialogues on transforming education*. Westport, CT: Bergin-Garvey/Greenwood.
- Skrtic, T. (1991). *Behind special education*. Denver, CO: Love.
- Skrtic, T. (1995). Special education and student disability as organizational pathologies: Toward a metatheory of school organization change. In T. Skrtic (Ed.), *Disability and Democracy: Reconstructing [special] education for postmodernity* (pp. 190-231). New York, NY: Teachers College Press.

APPENDIX A: INITIAL INTERVIEW GUIDE

Interview Guide

Opener

Can you tell me a little about your experience or background? What is your degree in? Did you think this was good preparation as an appraisal professional?

1. Recall a student with behavior problems who was referred to SBLC and there was little difficulty determining your next course of action.
 - What made it easy?
 - Was there anything that made it difficult?
 - What was the final SBLC decision?
 - What were your considerations? (What did you consider important? Why was it important?)
2. Tell me the story of a student with a behavior problem who was referred to SBLC and you had difficulty knowing what to do.
 - What leads you to say that or to feel that way?
 - What were your considerations?
 - What was the final SBLC decision?
 - What were the consequences of the decision?
3. Think of a time that you disagreed with the SBLC decision? Why or what lead you to feel that way?
 - What was at stake for you in this experience?
4. Think of a student who the committee in fact referred for an evaluation.
 - Was there anything that made this evaluation easy?
 - What were your considerations?
 - What was the final outcome?
 - What would you have changed about the experience?
5. In what ways does the Handbook assist you in your role? Are there other criteria, not in the book, that help in making decisions? Are there times when the procedures listed in the Handbook are difficult to follow?
6. How do you think your opinion affects decision-making on the team?
 - What leads you to say that or feel that way?
7. How do you think your training as a -----affects your decision making. Think of an example.
8. What do you see your role as in regards to the identification process?
 - Is there anything that impedes your role?
 - What would you like to change?

*Educational Implications for Children in Homeless Shelters and Beyond: Implications for All
Educators and Child Advocates*

Sadia Warsi, Ph. D. & Dorota Celinska, Ph. D.

Family Homelessness: The Significance of the Problem

Research has estimated that there are about two million homeless children in the country (Nunez, 1994; Whitlock, 1994). According to the Chicago Coalition for the Homeless, one of the most recognized organizations devoted to homelessness in Chicago, homelessness is on the rise. Between 1998 and 2002, emergency warming center beds for families in Chicago increased from 150 to 565, and emergency beds for single women increased from 40 to 170. Compared to the previous year, Chicago in 2001 had a 22 percent increase in requests for emergency shelter and a 35 percent increase in requests for shelter by families. Furthermore, it has been documented that upon leaving a Chicago transitional shelter (four-month program), only 17.5 percent of the residents have been able access permanent housing. Importantly, recent surveys of shelters in Illinois reported an 80 percent increase in family homelessness in the city, the result that supports the assumption that women and children significantly impacted by the recent increases in homelessness (Chicago Coalition for the Homeless, 2004).

Research on homelessness covers a wide variety of areas. These areas include but are not limited to the historical perspectives on homelessness, the causes of homelessness, mental health issues among the homeless, homeless populations (such as elderly, minorities and veterans), the availability of programs for the homeless, housing related issues, legal issues pertaining to homelessness, homeless women, and homeless families with children (Katz, 1989, Henslin, 1993, Whitlock, 1994). Homeless families with children in general and homeless children in particular have been an under-researched population (Roseman, 1990, Vissing, 1996). These topics are more often covered in literature which “crosses interdisciplinary lines” (Henslin, 1993, p. ix). Past literature on homeless children focused on homeless youth and runaway homeless children, and on children living in welfare hotels, emergency shelters and residential shelters. It also focused on their medical and psychological needs. However research on the educational lives of homeless children was limited, and is limited..

Research on the effects of living in a shelter presents a grim picture (Bassuk, 1986b; Nunez, 1994). “Homes embody the history, memories, and experiences that shape who we are” (Vissing, 1996, p. 79), and loss of a home can have a devastating impact on a child. Children grieve the loss of their homes. “I miss my house and yard. There we had a dog, but we had to get rid of him when we moved. I had this special tree I played under. I had my own room, and a window that overlooked the street. I miss my neighbors and friends too. I want to go home” (Vissing, 1996, p. 79). According to past and current studies, shelter living infringes on the families' abilities to provide their children with social and emotional comfort conducive to learning.

There are obvious differences between a homeless shelter and a home. “Shelter if it’s warm and safe, may keep a family from dying. Only a home allows a family to flourish and to breathe. When breath comes hard, when privacy is scarce, when chaos and crisis are on every side, it is

difficult to live at peace, even with someone whom we love" (Kozol, 1982, p. 50). Living at a shelter produces a new set of stresses for homeless children (Riblin, 1985; Roseman, 1990; Seltser, 1993; Wright, 1990).

Many shelters are overcrowded; they lack privacy, child-care facilities, and job training opportunities. Although the parents are thankful to have a place to stay, they compromise by losing their independence and their ability to raise their children (Bassuk, 1986a). "Shelter life begins to represent disappointments and threats to their dignity" (Seltser, 1993).

Most homeless shelters have limited space. There is seldom any place to go and sit down for a private conversation (Boxill, 1990a; Kozol, 1988). This lack of privacy prevents mothers from disciplining their children in ways that maintain respect for the family. Furthermore, it is not uncommon for children to be disciplined by non-family members.

Research on mother/child interaction at homeless shelters elucidates the hardships faced by the mothers and their children. Since most of the residential shelters are overcrowded, mothers are forced to mother their children in public. "Every aspect and nuance of the mother/child relationship occurs and is affected by its public and often scrutinized nature" (Boxill, 1990b, p. 58). Research also shows that the mother's role "unravels" in this communal setting (Boxill, 1990b, p. 59). The mothers at the shelter feel controlled and helpless: "I don't feel like I control anything" (Boxill, 1990, p. 60). "The traditional role of the mother as provider, family leader, organizer and standard-setter" (p. 60) is diminished in a shelter. Shelter administrators determine where the family eats, bathes, and rests. Shelter rules also create barriers. There are set schedules for mealtimes and bedtimes.

Recent studies evaluating shelter conditions conclude that there is an urgent need to change the inadequate shelter programs to meet the needs of families and children (Nunez, 1994). Nunez offers a model for serving the needs of homeless families. He emphasizes that the key to breaking the cycle of homelessness is educating the children and their families. The shelters should move away from simply providing temporary solutions to homeless families, to providing them with opportunities to break the cycle of homelessness. For example, shelters need to develop early childhood programs, provide adult education and job training, provide preventive health care programs, develop crises nursery programs, and most importantly, design programs that permit homeless families to remain together.

In light of the challenges of shelter living, it is to be expected that the prospect of an education for their children would be a source of hope for homeless families seeking to eventually break the cycle. The sad truth is, however, that attempting to provide their children with an education often adds to the families' frustrations (Vissing, 1996).

Vissing's (1996) research on homeless families and children in rural areas highlights some of the administrative roadblocks encountered by these families in securing an education for their children. For example, homeless families are often prevented from enrolling their children in public schools due to their inability to provide age, health, and educational records. These families may also have difficulties providing guardianship papers. Because of the families' constant mobility, many of these records are lost, and dates are forgotten. Furthermore, many homeless families have difficulty getting records transferred from one state to another or from one school to another.

As one school counselor explained, "These mothers come in... they're so frustrated and they've got enough on their minds. They don't know where the social security numbers are, and all of these silly things that the schools require. It is hard to have all the immunization records. We can bend the rules, but we can't break them" (Vissing, 1996, p. 93). Schools are flexible about enrolling a child who may not have all the academic records, but they are not flexible about missing immunization records. This means that if a family cannot retrieve the records in a month, the child has to receive a new battery of shots.

Another administrative dilemma faced by homeless families is providing the school with an address, phone number, and emergency contact information. Since families might be in transition from one shelter to another, they are unable to provide this information. Many parents are also unwilling to tell school officials about their homelessness out of fear that the child might be stigmatized in school. Therefore, the parents falsify information. This has its own risks. For example, at one school, a homeless child became ill, but his mother could not be contacted because of the false contact numbers she had given the school. The child finally told school authorities that he lived in an emergency shelter at night, and his mother searched for a job during the day (Vissing, 1996).

In addition these children show signs of depression, low self-esteem, and anger. Depression is common among children who are homeless (Nunez, 1994). The inability to control their lives leads to emotional problems (Molnar, 1990). At school they experience difficulties in making friends. They are ashamed of their homeless status, and they are fearful that their peers will discover that they are homeless. Their inability to maintain friendships stems from a lack of "security, orderliness, and belonging" (Vissing, 1997, p. 77).

These problems are aggravated by the lack of parental support these children receive at school. Homeless parent involvement is limited in schools, because of the families' lack of resources, and because they believe they do not have influence over their children's education. Parents are typically contacted by the schools only if the child is experiencing difficulties. However, since the mobility rate is high among the homeless population, and since energy is spent elsewhere, the families can do little to address the academic concerns raised by teachers.

Topping it all off is the fact that schools simply are not designed with homeless children in mind. Educators in recent studies admitted that although schools help in identifying and helping children at risk, "school structure and policies also contributed to the children's academic problems" (Kozol, 1988; Lively, 1996; Nunez, 1994; Rafferty, 1989; Vissing, 1996, p. 91). Most schools are designed to educate a stable child with a stable residence. Each semester at school builds on the previous semester's work. For homeless children, it is extremely difficult to succeed in school since they have to move from shelter to shelter frequently.

Studies on teenagers who are homeless show that "many children were not destroyed by their homelessness" (Vissing, 1992, p. 98). They made efforts to come to school regularly despite their daily living conditions and work schedules. In fact, school officials have been awed by the dedication shown by homeless children to come to school. A school nurse expressed her amazement at the strength she saw displayed by homeless children: "If I had to manage all they do, I couldn't pull it together to do all they do. But day after day, they hold their heads up high as they walk through the front doors of school" (p. 98).

While the McKinney Act has attempted to remove some obstacles to education for a growing population of homeless children and while there have been efforts to study various aspects of homelessness, there is an urgent need for better understandings on how best to serve children in shelters.

Since education is considered the key to breaking the cycle of homelessness (Bassuk & Gallanger, 1990; Nunez, 1994; Vissing, 1996), and early literacy development is closely linked to later academic success (Taylor & Dorsey-Gaines, 1988), it is imperative that we closely re-examine educational opportunities and interventions of young homeless children.

Directions for the Future

Restructuring Shelter Programs

Shelter environments have not been explored in terms of opportunities for literacy interventions. This situation may stem from societal view of the role of shelters as merely temporary housing facilities for people who are homeless, not centers of learning such as schools and home communities. Because shelters serve large numbers of children in poverty, sometimes over a long period of time (Henslin, 1993; Vissing, 1996), it is crucial to assist the shelters in expanding their roles beyond that of solely 'emergency operations'. In particular, engaging homeless children and families in meaningful literacy activities is of critical importance given that education is considered to be the key to breaking the cycle of homelessness (Bassuk & Gallanger, 1990; Nunez, 1994; Rafferty & Rollins, 1989; Vissing, 1996), and early literacy development is closely linked to later academic success (Roth et al., 1996; Taylor & Dorsey-Gaines, 1988).

Although a four-month residential shelter is designed as an emergency operation, what shelter directors, policy-makers and researchers need to realize is that for many homeless families, four months is as much stability as they will get if they do not get opportunities to break the cycle of homelessness. There has to be accountability about the shelter resources. Since the shelter is responsible for funding programs like parenting, playgroup, and computer training, it is imperative that these programs be restructured to meet the needs of all the children. Homeless families use the shelter as the last resort when all other resources are exhausted. The shelter as an institution is the only stable entity in the lives of many homeless families. It needs to use every opportunity to equip the families with meaningful tools that they can use to lift themselves and their children out of poverty. The resources that are in place need to alleviate the stress of homeless families, and they need to focus on the needs of all the children. The directors should ensure that the caregivers at shelter find meaningful ways to support children's literacy growth utilizing their daily routines and incorporate events such as storybook reading, pretend play, writing, speaking, and listening (Pellegrini & Galda, 1992). Also, the family as a whole should be involved in designing and implementing programs for their children.

In addition to providing resources and personnel to develop these shared reading sessions, shelter should incorporate the help of literate school-age children and their mothers. While the responsibility of providing literacy opportunities should not solely fall on these older children, the staff needs to understand that they are a very valuable resource. Book incentives, field trips and other leisure opportunities should be provided to these children to encourage them to provide the one-on-one reading instruction to their younger peers.

The research on emergent literacy has provided us with insight into the social nature of literacy development. We know that literacy development involves "both learning (on the part of the child) and teaching (on the part of the parents or other significant literate persons in the child's environment)" (Teale, 1982, p. 317). Many studies have described characteristics of homes that are "literacy-rich" (Durkin, 1966; Hoskisson, 1979; Teale, 1982; Heath, 1983; Taylor, 1983; Morrow, 1989). Several shared qualities present in these homes, point to social interactions, as crucial for the emergent literacy development in children. Specifically, parents in these homes respond positively to children's interactions around reading and writing and they provide the children with opportunities to interact with print. Further, children are surrounded by a variety of reading materials, making print in the home being easily available to interact with. Children in these homes also observe the function of writing in relevant activities, and have multiple opportunities to write themselves (referred to as "pencil and paper kids" in Durkin, 1966). Importantly, one of the most significant ways in which parents in these homes engage their children in meaningful literacy interactions was through shared book reading. In recognition of the importance of this family interaction for children's literacy Strickland and Morrow stated that shared book reading is "undoubtedly one of the most powerful catalysts for young children's language and literacy development" (1989, p. 29).

The importance of "literacy rich" environment for children's literacy development has been thoroughly documented in key literature on children's literacy development (Durkin, 1966; King & Friesen, 1972; Morrow, 1989; Neuman, 1999; Plessas & Oakes, 1964; Snow & Dickinson, 1990; Strickland & Morrow, 1989; Taylor, 1983; Teale, 1984). In an ethnographic study of community-based learning, Heath (1983) has documented the impact of the physical environment and children's social interactions with adults within their environment on their literacy activities. For example, young children from working class families interacted with older children who have learned to read to perform the tasks their daily life requires. Furthermore, they had several opportunities to "practice under the indirect supervision of older children" (p. 192). These children also watched adults read and write for a variety of purposes.

Introducing Shared Book Reading Sessions

Since children and families at the shelter have unstructured time and they feel a sense of loss and grief, books can undoubtedly provide leisure and education. Shelter staff literate parents, school aged children and community volunteers can create reading sessions with the families and specifically with the children in age appropriate group sessions. We know that shared book reading is "undoubtedly one of the most powerful catalysts for young children's language and literacy development" (Strickland & Morrow, 1989, p. 29). Research on the importance of shared book reading indicates that parents and older siblings who regularly read to the young children assisted in the children's early literacy development (Morrow, 1989; Strickland & Morrow, 1989; Taylor, 1983; Teale, 1984), and facilitated their natural interest in books (Durkin, 1966; King & Friesen, 1972; Plessas & Oakes, 1964). The interaction involved in shared book reading also improves the educational outcomes for young children (Taylor, 1983; Strickland & Morrow, 1989). In fact "no other single activity is regarded as important as the shared experience between caregivers and children" (Neuman, 1999, p. 286).

Creating Opportunities for Personal Narratives

Children at the shelter need to express their feelings to listening and attentive adults since they need an outlet for their frustrations. The educational impact of narratives should not be

underestimated. Children who are able to produce narratives conforming to the forms expected at school participate in classroom discourse more effectively, become more competent writers, and are evaluated by their teachers as better students than peers who fail to meet school standards of narrative performance (Heath, 1983; Snow & Dickinson, 1990). Narrative abilities have also been found to be a significant predictor of concurrent and long-term decoding and reading comprehension skills in low-income 6- and 7-year-olds with reading and/or language difficulties (Feagans & Applebaum, 1986; Feagans & Short, 1984). Noteworthy, the contribution of narrative skills to literacy achievement increases in older children who have made a successful transition to fluent reading (Roth et al., 1996).

The facilitative effects of narrative abilities on children's literacy achievement stem from the fact that narratives constitute a distinct cognitive framework for representing human action and social interaction that contextualizes abstract concepts and allows personally meaningful integration of prior experience with new knowledge (Bruner, 1986, 1990, 1991; Bruner & Lucariello, 1989; Egan, 1999, Olson, 1990; Wells, 1986). As a meaning-making strategy, narratives facilitate children's interpretation of literature, leading to deeper understandings of cultural beliefs and practices (Miller, 1988) and more meaningful participation in classroom learning (Egan, 1993, Hicks, 1995-1996, Wells & Chang-Wells, 1992). The benefits of enriched use of narrative forms of meaning making for understanding of, and engagement in, textual content has been recently documented in urban struggling readers (Zigo, 1998, 2001). When encouraged to use narrative forms of interpretation, in conjunction with text based lessons, these students demonstrated increased engagement with textual content, use of critical thinking strategies, and retention of content-specific vocabulary. Furthermore, Miller and Legge (1999) documented that at-risk struggling readers and writers were able to maintain such gains over time, increasing their independence as critical readers capable of rich and complex interpretations of texts.

Educational Implications for Teachers

Teachers in general need to realize that they will have a diverse population of children in their classrooms, including children who are homeless. It is very important that teachers learn about the family's circumstances in a respectable manner. They should make the child comfortable in the classroom. Some of the basic educational needs of children who are homeless include completing homework and finding a quiet place to study. Teachers can structure time during the day when these children can get some personal space and attention to complete assignments and homework. Since many such children come to school hungry, teachers should also allow the students an opportunity to have breakfast in the morning. Although many homeless children move from school to school, teachers need to make them feel wanted and make sure that the children are included in all educational activities.

The special education staff at the schools should work together with the general educators in assessing the children who show signs of academic problems, and they can, as a team, work with the teachers in modifying the curriculum to meet the needs of individual students. Special educators have to work with the general education teachers in addressing the needs of all students, providing additional help without stigmatizing the children. Providing segregated remedial instruction is not the solution (Quint, 1994). According to Quint, studies such as those conducted by Garcia, Jimenez, and Pearson (1989) of at-risk children show that homeless children received minimal instruction, and they never learned the necessary comprehension strategies needed for interpretation of texts. Part of the solution lies in equipping homeless children with strategies instead of wasting valuable time in rote information and drills. Both

general and special education teachers need to engage these children in reading by involving them in "group discussion of the author's purpose, the drawing of inferences, and the summarization of themes" (Quint, 1994, p. 114).

In light of research findings regarding these families and their children, policy makers need to come forward with solutions. They need to involve the parents, shelter directors, and the children themselves. The first step in constructing any program to increase parent participation is viewing parents as potential allies rather than adversaries (Harry, 1995).

Researchers need to explore new methodologies when studying underprivileged and transient populations in terms of data collection, and when assessing the researcher's attachment to the participants in the study.

Conclusions

To be successful readers and writers, these children need to be guided toward literacy competencies through group discussion of the textual content and purposes, inferencing about various textual components, and summarization of main ideas and themes (Quint, 1994). Shared book reading should be linked to narrating about personal experience related to the content of reading. Literacy development has been shown to be strongly correlated with children's narrative abilities - one of the most significant correlates of various aspects of reading achievement (Feagans & Applebaum, 1986; Roth et al., 1996), as well as student participation in classroom discourse and engagement in school tasks (Feagans, 1982, Heath, 1983; Hicks, 1995-1996; Snow & Dickinson, 1990). Engaging homeless children in these activities is of critical importance given that early literacy development is closely linked to later academic success (Roth et al., 1996; Taylor & Dorsey-Gaines, 1988). By providing homeless children with critical thinking and personally meaningful literacy activities appears to be a possible solution to addressing comprehension problems of homeless children. In contrast to a focus on rote information and drills, these experiences will equip them with literacy learning strategies necessary for becoming independent and reflective readers.

If being literate improves the chances of a child's social and economical success in society, and that it can facilitate a child's transition out of poverty, then it becomes society's obligation to provide opportunities to children in homeless shelter. The shelter as an institution is the only stable entity in the lives of many homeless families. With the realization that literacy intervention will provide homeless children with skills to succeed in school and possibly out of homelessness, the shelter staff can develop meaningful ways to support children's literacy growth utilizing their daily routines and incorporating literacy events such as storybook reading, pretend play, oral narrating, writing, speaking, and listening. Ultimately, the whole family should be involved in designing and implementing programs for their children.

Further studies will provide shelter directors, policy makers, educators, and other professionals working with homeless children with valuable insights necessary for designing literacy educational programs responsive to homeless children's unique experiences, needs, and interests. Researchers can expand on the existing research on homelessness to understand how children perceive their living in shelters and how these children can be assisted in dealing with these experiences by telling and retelling of their personal and text based narratives. Also, research questions related to exploring strategies that are most effective for children in poverty need

further attention in addition to the possibility of using multiple types of text genres, including narrative and expository texts, to enhance and enrich literacy and narrative skills.

References

- Bassuk, E. (1986). *Homeless families: Homeless single mothers and their children in Boston shelters, Mental Health Needs of Homeless Persons*. San Francisco: Jossey-Bass.
- Bassuk, E., & Gallanger, M. E. (1990). *The impact of homelessness on children*. In A. N. Boxill (Ed.), *Homeless children: The watchers and waiters*. Binghamton, New York: Haworth Press.
- Boxill, A. N. (1990). *Homeless children: The watchers and waiters*. Binghamton, New York: Haworth Press.
- Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Bruner, J. (1991). The narrative construction of reality. *Critical Inquiry*, 18, 1-21.
- Bruner, J., & Lucariello, J. (1989). Monologue as narrative recreation of the world. In K. Nelson (Ed.), *Narratives from the Crib*. Cambridge, MA: Harvard University Press.
- Chicago Coalition for the Homeless. [Http://www.chicagohomeless.org/IndexNew.asp](http://www.chicagohomeless.org/IndexNew.asp)
- Durkin, D. (1966). *Children who read early*. New York: Teachers College Press.
- Egan, K. (1993). Narrative and learning: A voyage of implications. *Linguistics and Education*, 5, 119-126.
- Egan, K. (1999). *Children's minds, talking rabbits, and clockwork oranges: Essays on education*. New York: Teachers College Press.
- Feagans, L. (1982). The development and importance of narratives for school adaptation. In L. Feagans & D. C. Farran (Eds.), *The language of children reared in poverty: Implications for evaluation and intervention* (pp. 95-116). New York, NY: Academic Press.
- Feagans, L., & Appelbaum, M. I. (1986). Validation of language subtypes in learning disabled children. *Journal of Educational Psychology*, 78, 358-364.
- Feagans, L., & Short, E.J. (1984). Developmental differences in the comprehension and production of narratives by reading-disabled and normally achieving children. *Child Development*, 55, 1727-1736.
- Garcia, G., Jimenez, R., & Pearson, P. (1989). *An annotated bibliography of research related to reading of at risk-children* (Tech. Rep. No. 482). Urbana-Champaign: University of Illinois, Center for the Study of Reading.
- Glasser, B. & Strauss, A. (1967) *The discovery of grounded theory*. Chicago: Adeline.
- Heath, S. B. (1983). *Ways with words*. Cambridge: University Press.
- Henslin, J. M. (1993). *Homelessness: An annotated bibliography*. (Vol. 1). New York & London: Garland Publishing, Inc.
- Hicks, D. (1995-1996). Discourse, learning, and teaching. In M. W. Apple (Ed.), *Review of research in education*, 23 (pp. 119-169). Washington, DC: AREA.
- Hoskisson, K. (1979). Learning to read naturally. *Language Arts*, 56, 489-496.
- Katz, M. (1989). *The undeserving poor*. New York: Pantheon Books.
- King, E. M., & Friesen, D. T. (1972). Children who read in kindergarten. *Alberta Journal of Educational Research*, 18, 147-161.

- Kozol, J. (1988). *Rachel and her children*. New York: Crown.
- Lincoln, Y. S., & Guba, E. S. (1985). *Naturalistic Inquiry*. Thousand Oaks: Sage.
- Merriam, B. S. (1998). *Qualitative research and case study applications in education*. California: Jossey-Bass Inc.
- Miller, S. M., & Legge, S. (1999). Supporting possible worlds: Transforming literature teaching and learning through conversations in the narrative mode. *Research in the Teaching of English*, 34, 10-64.
- Miller, P. J. (1988). Narrative practices: Their role in socialization and self-construction. In U. Neisser & R. Fivush (Eds.), *The remembering self: Construction and accuracy in the life narrative* (pp. 158-179). New York: Cambridge University Press.
- Morrow, M. L. (1989). *Literacy development in the early years: Helping children read and write*. New Jersey: Prentice-Hall, Inc.
- Neuman, S. B. (1999). Books make a difference: A study of access to literacy. *Reading Research Quarterly*, 34, 286-311.
- Nunez, R. D. (1994). *Hopes Dreams and Promise*. New York: Institute for Children and Poverty.
- Olson, D. R. (1990). Thinking about narrative. In B. K. Britton & A. D. Pellegrini (Eds.), *Narrative thought and narrative language* (pp. 99-111). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Plessas, G. P., & Oaks, C. R. (1964). Pre-reading experiences of selected early readers. *Reading Teacher*, 17, 241-245.
- Quint, S. (1994). *Schooling homeless children: A working model for America's schools*. New York: Teachers College Press.
- Rafferty, Y., & Rollins, N. (1989). *Learning in Limbo: The educational deprivation of homeless children*. New York: ADvocates for Children of New York, Inc.
- Rivlin, L. G. (1986). A new look at the homeless. *Social Policy*, 16(4), 3-10.
- Rosenman, M. S., & Stein, L. M. (1990). Homeless children: A new vulnerability. In A. N. Boxill (Ed.), *Homeless children: The watchers and waiters*. Binghamton, New York: Haworth Press.
- Roth, F. P., Speece, D. L., Cooper, D. H., & De La Paz, S. (1996). Unresolved mysteries: How do metalinguistic and narrative skills connect with early reading? *The Journal of Special Education*, 30(3), 257-277.
- Snow, C. E., & Dickinson, D. K. (1990). Social sources of narrative skills at home and at school. *First Language*, 10, 87-103.
- Stake, E. R. (1995). *The art of case study research*. San Francisco: Jossey-Bass Publishers.
- Strickland, D. S. & Morrow, L. M. (1989). *Emerging literacy: Young children learn to read and write*. Delaware: International Reading Association.
- Taylor, D., & Dorsey-Gaines, C. (1988). *Growing up literate: Learning from inner-city families*. Portsmouth: Heinemann.
- Taylor, D. (1983). *Family Literacy: Young children learning to read and write*. Exeter: Heinemann.
- Taylor, D., & Dorsey-Gaines, C. (1988). *Growing up literate: Learning from inner-city families*. Portsmouth, NH: Heinemann.
- Teale, W. H. (1982). Toward a theory of how children learn to read and write naturally. *Language Arts*, 59 (6), 555-570.
- Teale, W. H. (1984). Reading to young children: Its significance in the process of literacy

- development. In Goelman, H., Oberg, A., & Smith, F. (Eds.), *Awakening to literacy* (pp. 110-121). Exeter: Heinemann.
- Vissing, M. Y. (1996). *Out of sight, out of mind: Homeless children and families in small-town America*. Lexington: The University Press of Kentucky.
- Wells, G. (1986). *The meaning makers*. London: Hodder & Stoughton.
- Wells, G., & Chang-Wells, G. L. (1992). *Constructing knowledge together: Classrooms as centers of inquiry and literacy*. Portsmouth, NH:Heinemann.
- Whitlock, R. V., Lubin, B., & Sailors, R. (1994). *Homelessness in America, 1893-1992: An annotated bibliography*. Westport: Greenwood Press.
- Wilson, S. (1979). Explorations of the usefulness of case study evaluations. *Evaluation Quarterly*, 3, 446-459.
- Wright, D. J. (1998). *Behind the golden door*. New York: Aldine de Gruyter.
- Zigo, D. (1998). *"We have needs": The meaning-making strategies of urban middle school struggling readers in special education classrooms*. Unpublished doctoral dissertation. State University of New York, Buffalo.
- Zigo, D. (2001). From familiar worlds to possible worlds: Using narrative theory to support struggling readers' engagement with texts. *Journal of Adolescent and Adult Literacy*, 54(1), 62-71.

*Research on Self-Management Techniques Used by
Students with Disabilities in General Education Settings: A Promise Fulfilled?*

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Abstract

This comprehensive review synthesizes findings from 43 studies in which students with disabilities utilized behavioral self-management (BSM) techniques in general education settings. Findings suggest that the long-standing promise of BSM as an inclusive technique has been partially fulfilled. The review identifies strengths and limitations of BSM studies and BSM techniques, provides recommendations for future research and practice, and identifies BSM training materials.

*Recent Research on Self-Management Techniques Used by
Students with Disabilities in General Education Settings: A Promise Fulfilled?*

Researchers and practitioners have long noted the promise of behavioral self-management (BSM) to improve academic and social outcomes, especially for students with disabilities and their teachers, and to promote inclusion of such students in general education (GE) settings (McDougall, 1998). Extensive support for BSM efficacy is evident in early reviews (McLaughlin, 1976; O'Leary & Duby, 1979), later reviews (Hughes, Ruhl, & Misra, 1989; Martin & Mithaug, 1986; Nelson, Smith, Young, & Dodd, 1991; Skiba & Casey, 1985; Stage & Quiroz, 1997; Wolery & Schuster, 1997), and recent reviews (Barry & Haraway, 2005; Hitchcock, Dowrick & Prater, 2003; Lancioni & O'Reilly, 2001; Mooney, Ryan, Uhing, Reid, & Epstein, 2005; Post & Story, 2002). However, very few of the hundreds of BSM studies published since 1970 have targeted students with disabilities in GE settings. In this review, we examine BSM efficacy for students with disabilities in GE settings. We also evaluate how BSM has fulfilled its promise as an inclusive technique and provide corresponding recommendations.

The Promise and Benefits of BSM for Students, Teachers, and Inclusive Education

For students, BSM: (a) "has offered the promise of a set of procedures to modify undesirable behavior without relying on external agents (such as parents, teachers, peers) to administer reinforcement and punishment contingencies" (Christie, Hiss, & Lozanoff, 1984, p. 392); (b) "encourages the child to become a more responsible agent in the education process [and] engenders initiative and independence" (Rooney, Hallahan, & Lloyd, 1984, p. 360); (c) reduces dependence on external agents and teachers for reinforcement, control, and guidance (Nelson, Smith, Young, & Dodd, 1991; Workman & Hector, 1978); (d) helps students "learn and behave in the absence of adult oversight" (Prater, Hogan & Miller, 1992, p. 44); (e) helps students meet teacher expectations for routine performance in GE settings, including completing tasks accurately, arriving punctually at class, having materials ready, and completing homework (Clees, 1994-5); (f) promotes self-regulation, responsibility, and skills that students use

throughout their lifetime (Hogan & Prater, 1993); (g) reduces excessive or coercive adult control (Dunlap, Dunlap, Koegel, & Koegel, 1991; Falk, Dunlap & Kern, 1996); and (h) promotes active involvement and counters inactive learning styles, strategy deficiencies, inattentiveness, and passivity (Hallahan, Marshall, & Lloyd, 1981; Prater, Joy, Chilman, Temple, & Miller, 1991; Rooney, Hallahan, & Lloyd, 1984).

For teachers, BSM ‘frees up’ time to plan lessons, design learning environments, and instruct lessons rather than manage problem behaviors (Rosenbaum & Drabman, 1979; Trammel, Schloss & Alper, 1994). BSM requires less supervision compared to teacher-directed strategies (Dunlap, Dunlap, Koegel, & Koegel, 1991) and it increases efficiency by saving teachers’ time and money (Clees, 1994-5; Gardner, Clees, & Cole, 1983).

After passage of the Education of All Handicapped Children Act of 1975 and its corresponding mandate to provide services in the least restrictive environment, the literature noted the promise of BSM as an inclusive technique (McDougall, 1998). Rooney, Hallahan, and Lloyd (1984) reported that BSM “holds promise of use in mainstream settings” (p. 363) and “seems particularly well-suited for use in regular classrooms” (p. 360). In addition, Edwards, Salent, Howard, Brougher, and McLaughlin (1995) noted that BSM “holds promise for use in mainstream settings for students with very compelling educational needs” (p. 12) and that BSM “techniques are a powerful tool which might allow otherwise segregated children to be included in the regular classroom” (p. 16). The literature consistently cites a few reasons why BSM has the potential to promote inclusion. First, BSM techniques are portable across settings (Thoreson & Mahoney, 1974). Second, BSM techniques can promote maintenance and generalization of performance from training and special education settings to GE settings (Falk, Dunlap & Kern, 1996; Osborne, Kiburz & Miller, 1986; Rhode, Morgan, & Young, 1983). Third, BSM techniques are adaptable, unobtrusive, easy to implement, and accommodate individual students needs without overburdening teachers (Dunlap, Dunlap, Koegel, & Koegel, 1991). Thus, GE teachers, whose classes now include more students with disabilities than in the past, might be more willing to implement BSM than more intrusive procedures (Hogan & Prater, 1993; Prater Hogan, & Miller, 1992; Rooney, Hallahan, & Lloyd, 1984).

BSM Efficacy and the Need for Research and Application of BSM in General Education

In a comprehensive review of BSM studies published from 1970 to 1997, McDougall (1998) concluded that BSM produced relatively consistent moderate-to-strong outcomes for students with disabilities in inclusive GE settings. However, like Hughes, Ruhl, and Misra (1989) one decade earlier, McDougall (1998) lamented the unfulfilled promise of BSM, as evidenced by the paucity of Category III studies ($n = 13$), in which students with disabilities applied BSM techniques in GE settings, compared to more than 240: (a) Category I studies, in which students with disabilities applied BSM techniques in non-integrated settings, such as resource rooms; and (b) Category II studies, in which students without disabilities applied BSM techniques in GE settings. McDougall also identified issues for researchers and teachers to address when having students with disabilities use BSM in GE settings. See Table 3, left column. First, train students directly in the GE settings where they will use BSM techniques, rather than training them in special education settings and expecting generalization to GE settings. Second, ensure via periodic monitoring that students actually use the BSM techniques in the manner expected (i.e., punctually and accurately). Third, apply BSM techniques (self-evaluation, self-graphing, self-reinforcement, self-modeling, and self-instruction) and target dependent variables (social interaction, homework completion, and aggressive behaviors toward self and others) that are rare

in Category III students, but which have empirical support via Category I and II studies. Likewise, expand use of BSM beyond: (a) academic classes, to the playground, cafeteria, hallways, gym, music, and art; and (b) students with learning disabilities, emotional-behavioral disorders, and AD/HD, to students with mental retardation, autism, and other disabilities.

BSM Models and Techniques

BSM techniques reviewed here are based on cognitive-behavioral models that attribute self-directed learning and behavioral self-control (BSC) to the reactive effects of cognitive factors, such as awareness and self-talk, and behavioral factors, such as antecedents, observable actions, and consequences (Kanfer & Karoly, 1972a, 1972b; Meichenbaum, 1977; Rachlin, 1974; Skinner, 1953). In 1973, Glynn, Thomas, and Shee proposed a four-component model of BSC: (a) self-assessment (e.g., covert questions about performance, such as “Am I on-task?”); (b) self-recording (e.g., overt responses to self-assessment questions, such as checking yes or no on a self-recording form); (c) self-determination of reinforcement (i.e., specifying types, amounts, and schedules of reinforcement); and (d) self-administration of reinforcement (i.e., delivering reinforcement contingent on performance). The first two components in this BSC model comprise self-monitoring, which can be cued covertly (i.e., student reminds self) or overtly (e.g., via tape-recorded audio cues). Meichenbaum (1977) described another traditional BSC component, self-verbalization or self-instruction, in which students talk themselves through a task (e.g., studying, “Look at the first word, say and spell it. Car, c-a-r.”).

In the 1980s, the term BSM replaced the term BSC. Researchers and practitioners reported that BSM skills were necessary for self-determination, whereby individuals with disabilities have “the capacity to choose and to have those choices be the determinants of one’s actions” (Deci & Ryan, 1985, p.38). Researchers have developed additional BSM components, such as: (a) self-graphing, whereby students obtain on-going feedback by charting results soon after they perform a task (DiGangi, Maag, & Rutherford, 1991; McDougall & Brady, 1998); (b) self-evaluation, whereby students judge the quality of their own performance (Grossi & Heward, 1998); and (c) video self-modeling (VSM), whereby students view videotaped images of themselves performing tasks and, thereby, serve as their own model (Dowrick, 1999; Hitchcock, Dowrick & Prater, 2003; Lonckecker, Brady, McPherson, & Hawkins, 1994).

Purposes of this Literature Review

Our purposes were to analyze critically Category III BSM studies published since McDougall’s (1998) review and to provide corresponding recommendations for researchers and practitioners. We expanded upon McDougall’s three major questions.

1. “To what extent have researchers investigated the use of BSM techniques by students with disabilities in general education settings?” (p. 312). Have researchers expanded investigations of BSM techniques in integrated or inclusive settings?
2. “How have these BSM techniques been implemented (e.g., specific procedures used, participants and types of disabilities selected, and outcome variables targeted)?” (p. 312). Have investigators diversified BSM techniques and applied novel BSM techniques in integrated or inclusive settings?
3. “How effective have BSM techniques been in improving academic and social outcomes for students with disabilities in general education settings?” (p. 312). To what extent have BSM techniques fulfilled their oft-cited potential as inclusive techniques?

Method

Search Process

The first author searched for Category III BSM studies using: (a) EBSCOhost, Academic Search Premier, ERIC, Professional Development Collection, PsycINFO, and Psychology and Behavioral Sciences Collection; (b) published reviews on BSM; (c) manual inspection and computer-index scanning of recent journal issues; and (d) reference lists of articles from the aforementioned sources. Initial web-based searches utilized the terms self and management and disabilities in the default field. Subsequent searches combined BSM terms (see Criteria for Selecting BSM Studies, item 4) with other terms (general education, special education, video, learning disabilities, emotional, behavioral, disorders, disturbance, impairment, autism, speech, hearing, visual, mental retardation, developmental disabilities, attention deficit, and hyperactivity). The first author read and eliminated all search-generated abstracts for articles that clearly failed to qualify for this review. Then he obtained, read, and screened full-text articles for all remaining abstracts via on-line services, interlibrary loans, and visits to libraries at major universities in five states in the US. We also contacted authors of difficult-to-access articles.

Criteria for Selecting BSM Studies

We used the following inclusion and exclusion criteria, which we adapted from McDougall (1998), to identify studies that qualified as Category III BSM interventions.

1. Study participants included at least one student with an identified disability according to guidelines from: (a) the 1997 Amendments of the Individuals with Disabilities Act or the Individuals with Disabilities Education Act of 1990; (b) Section 504 of the Rehabilitation Act of 1973; (c) state and local education agencies; and (d) national or provincial sources. We excluded studies that did not document disability status and those that only identified participants as being at risk or having learning or behavior problems.
2. Study settings included at least one GE classroom or school-related environment that included the concurrent presence of students with and without disabilities. Settings could not be only non-integrated locations, such as self-contained classrooms, resource rooms, or special programs, where only students with disabilities, or students with disabilities and 'at-risk' students, were present (e.g., Category I studies). Settings also could not be locations where only students without disabilities were present (e.g., Category II studies).
3. Dependent variables included quantitative measures of: academic engagement, performance, or outcomes; related academic variables; or social behaviors. We excluded descriptive studies without quantitative measures of targeted outcomes and studies that reported only qualitative measures, verbal reports, or anecdotal information.
4. Interventions included one or more BSM components: self-monitoring and its two constituent components, self-assessment and self-recording; self-evaluation; self-instruction; self-reinforcement; self-graphing; and self-modeling.
5. Studies were published in professional journals from January 1997 to June 2005.

Finally, because extensive documentation exists already (cf: Algozinne, Browder, Karvonen, Test, & Wood 2001; Graham, Harris, & Troia, 2000; Palmer & Wehmeyer, 2003), we excluded studies of self-regulated strategy development and self-determination unless the studies used BSM as the primary intervention.

Framework for Reporting Data and Coding Information from Category III BSM Studies

We adapted McDougall's (1998) framework to report descriptive data in Table 1 and findings about procedural and outcome variables in Table 2. To bolster the credibility of information reported in Tables 1 and 2, we operationally defined variables of interest, used coding directions, and trained independent coders. The first author was the primary coder and the remaining authors and research assistants were secondary coders. We calculated appropriate indices of agreement that included: (a) percentage of inter-coder agreement ($I-CA = \text{equals number of agreements divided by number of agreements plus disagreements, multiplied by } 100\%$); (b) Kappa (k) to adjust $I-CA$ for chance agreements on dichotomously coded variables (Cohen, 1960); and (c) correlation coefficients (r).

Agreement for variables reported in Table 1 was as follows: total number of participants, number of female participants, and number of male participants in each study ($r = 1.00$); number of participants by disability ($r = 1.00$); settings ($I-CA = 100\%$); dependent variables and dependent variables measurement ($I-CA = 96\%$); independent variables ($I-CA = 100\%$); research designs ($I-CA = 100\%$). Agreement for variables reported in Table 2 was as follows: magnitude of intervention efficacy ($I-CA = 86\%$); presence of information on intervention integrity ($I-CA = 100\%$ and $k = 1.00$ for both initial training and ongoing adherence to intervention procedures); magnitude of reliability of dependent variable measurement ($I-CA = 100\%$); use of Kappa ($I-CA = 100\%$, $k = 1.00$); formal use of maintenance probes or follow-up ($I-CA = 100\%$, $k = 1.00$); formal use of generalization probes ($I-CA = 100\%$, $k = 1.00$); social validity [$I-CA = 100\%$ and $k = 1.00$ for both the social comparison and subjective evaluation methods (Kazdin, 1982)].

Findings for Descriptive Variables

Table 1 and the following paragraphs summarize descriptive data from the 43 Category III studies that qualified for this review.

Authors and Year of Publication. The most prolific authors were Wehmeyer, Hughes, and Agran, who teamed and co-authored 9 studies. Bugghey, Copeland, Fowler, and Rock authored 3 studies each. Blanchard, Church-Pupke, DuPaul, Horner, and Todd authored 2 studies each. Four to five studies were published each year from 1997 through mid-2005, except for 2003 ($n = 3$) and 2005 ($n = 7$).

Participants

Number. The 43 studies included a total of 385 participants (range = 1 to 123 participants). The median and mode number of participants was 3 ($n = 11$ studies). Nine studies had one participant and eight studies had two participants. Two quasi-experimental group studies had 172 (i.e., 123 and 49) of the 385 total participants. One applied behavior analysis or 'small- n ' study with a multiple baseline design across three classrooms used 97 participants.

Gender and age. Sixty-seven percent of the participants were male and 33% were female. Authors of one study did not identify participants' gender. Participants ranged in age from 4 to 19 years old. The number of studies that included primarily participants of the following age ranges were: 15 to 19 years ($n = 6$); 12 to 15 years ($n = 9$); 8 to 12 years ($n = 17$); 5 to 8 years ($n = 10$); and pre-k or 4 years ($n = 1$).

Disability status. Twenty-two of the 43 studies included participants with a single disability; 21 studies included participants with more than one disability. In order of magnitude, these disabilities, with the corresponding number of studies that included participants with that

disability in parentheses, were mental retardation (11), learning disabilities (10), autism (9), serious emotional disturbance or behavior disorders (7), speech-language impairments (7), AD/HD (4), Asperger (4), hearing impairments (3), developmental disabilities (3), and visual impairments (2). The following disabilities were represented in one study each – other health impairments, orthopedic impairments, physical disabilities, multiple disabilities, mild educational handicap, oppositional defiant disorder, and pervasive developmental delay.

Settings

Thirty-five of 43 studies utilized multiple settings and eight studies used a single setting. Some authors broadly identified settings as a GE classroom (n = 9 studies) or a special education classroom (n = 5 studies). However, most authors specifically identified classes. These classes, with the corresponding number of studies that utilized such settings in parentheses, were math (7), reading (5), physical education/gym (5), science (4), social studies (4), English (3), history (3), language arts (3), and art (2). In addition, each of the following classes served once as a setting in a study – agricultural biology, agricultural mechanics, auto mechanics, cosmetology, Gaelic, life skills, occupational health, religion, and Spanish. Other settings were school hallways (4), playground and recess (3), free time (2), free play (2), work-time (2), seatwork (1), circle time (1), center time (1), lunch (1), study hall (1), homeroom (1), library media center (1), and a classroom leisure setting (1). One study used multiple settings outside the school, including a public library, a fast food restaurant, and a neighborhood street.

Dependent Variables

Thirty-four of 43 studies targeted multiple dependent variables. Dependent variables targeted most frequently, with the corresponding number of studies in parentheses, included: variations of on-task, engaged, and disruptive behaviors (25); social skills and communication (14); variations of academic performance (10); ‘classroom survival’ or ‘essential’ skills, such as having materials ready (9); and teacher praise (2). Homework completion was the primary dependent variable in one study, although additional studies incorporated homework completion as part of multi-faceted outcome measures. A few studies also measured teachers’ perceptions of participants’ performance or behavior. Teachers and researchers prescribed target behaviors in 37 studies. Participants selected or helped to select their target behaviors in the 6 remaining studies.

Measurement of Dependent Variables

Of the 39 studies that used observational recording systems to measure dependent variables, 24 reported data as the percentage of intervals in which the target behavior occurred. Nineteen studies reported simple frequency counts and 15 studies reported data on the percentage of responses, skills, or steps completed or completed correctly. Eleven studies collected permanent products, such as students’ written work. Eight studies used informal ratings, such as Likert-type scales, and six studies used formal instruments (e.g., published scales). Three studies reported rate, two studies reported duration, and one study reported latency.

Independent Variables

Self-monitoring (n = 26) and self-evaluation (n = 19) were the most frequently applied BSM components, followed by self-reinforcement (n = 8), self-instruction (n = 6), VSM (n = 4), self-selection of goals (n = 3), and self-graphing (n = 2). Independent variables in 11 studies included antecedent cue regulation with visual or audio prompts, which included communication books, photo activity schedules, cards with pictures or written phrases, and self-operated auditory prompts. Independent variables in 17 studies included multiple BSM components. Finally, 29 of

43 studies combined BSM with ‘external’ intervention features, such as externally delivered reinforcement or prompts, corrective or performance feedback from teachers, and sessions when teachers and students compared their respective observations or data.

Research Designs

Thirty-eight of 43 studies utilized small-n research designs. Three other studies utilized quasi-experimental group designs and the two remaining studies did not utilize systematic research designs (i.e., an uncontrolled case study and a descriptive demonstration). Of the 38 small-n designs, 3 used primarily reversal designs and 34 used variations of the multiple baseline, including 2 multiple probe designs. Two small-n studies used a changing conditions design rather than the designs that authors reported. A few investigators embedded additional small-n design elements (i.e., reversal phases, alternating treatments, and multiple probes) to supplement the primary research design of their respective studies. Finally, investigators often incorporated phases to fade intervention components.

Findings on Efficacy, Integrity, and Outcomes of BSM Interventions

Table 2 and the following paragraphs summarize findings for intervention efficacy, as well as procedural integrity and outcome variables.

Intervention Efficacy

For studies that used small-n research designs, we evaluated functional control of interventions. That is, we visually inspected graphed data for changes in means, changes in trends, changes in level, stability-variability, latency, and overlap (Kazdin, 1982). For studies that used quasi-experimental group designs, we examined results of inferential statistical procedures used to test research hypotheses. We also searched for author-reported effect sizes in all studies. In the 38 studies that used small-n designs, BSM interventions demonstrated: (a) strong functional control over target behaviors in 12 studies; (b) moderate-strong functional control in 8 studies; (c) moderate-mixed functional control in 9 studies; and (d) weak, limited, or no functional control in 9 studies. Three quasi-experimental group studies demonstrated mixed-moderate efficacy. Two studies failed to use systematic research designs, which precluded evaluation of intervention efficacy. Only 2 of the 43 studies reported effect sizes.

Intervention Integrity

We identified whether authors reported numerical indices to verify the quality of: (a) initial training procedures (e.g., training participants or teachers to a specific mastery criterion on BSM); and (b) treatment fidelity or adherence to ongoing intervention procedures (Mertens, 1998). Twenty-seven studies did not report an index for quality of initial training procedures and 29 studies did not report an index for adherence to ongoing intervention procedures. Only seven studies reported numerical indices for both of these elements of intervention integrity. These indices, when reported, almost always reflected high levels of intervention integrity.

Interobserver Agreement or Reliability Indices for Dependent Variable Measures

Thirty-five of 43 studies included indices of interobserver (IO) agreement or reliability for dependent variable measures. Of these 35 studies, IO agreement or reliability was high for 25 studies, moderate to high for 4 studies, and moderate in 5 studies. We could not evaluate reliability for one of these 35 studies because the IO calculation formula ($A/A+D \times 100\%$) reported appeared to be inconsistent with the dimension of measurement for the dependent

variable (i.e., duration measures require the formula, shorter duration/longer duration x 100%). Although 38 of 43 studies used observational recording systems amenable to Kappa, only three studies used Kappa and only 2 of these 3 studies included clear data for Kappa.

Maintenance Probes or Follow-up

Investigators in 5 of the 43 studies formally assessed maintenance of changes in participants' target behaviors. Formal assessment of maintenance required non-contiguous data collection - that is, an intervening period between the last session of the final intervention phase of contiguous data collection and the first maintenance probe or follow-up session. Maintenance was strong in each of these 5 studies and these investigators collected maintenance data 2 weeks to 6 months after the final intervention phase ended. Investigators in 23 of the 43 studies informally assessed maintenance when they collected contiguous data during: (a) post-training phases that immediately followed a training phase; or (b) phases when they faded, reduced, or removed intervention components. Maintenance was strong in most of these 23 studies. Finally, investigators in 15 studies failed to address maintenance.

Generalization

Investigators in most studies indirectly or directly addressed generalization of treatment impact. For example, investigators in 34 studies measured treatment impact on more than one dependent variable; 35 studies reported outcomes in more than one setting. Participants in eight studies were trained initially or first used BSM in special education settings, then applied BSM techniques in GE settings with additional or continual training, or with elements of initial training. Investigators in 35 studies trained participants or measured initial outcomes directly in GE settings and, thereby eliminated the need to determine whether intervention effects generalized from special education to GE settings. Three studies failed to address generalization in any manner, either directly (e.g., via generalization probes) or indirectly (e.g., via multiple dependent variables or multiple baseline designs).

Social Validity of Changes in Target Behaviors

Investigators in 23 of 43 studies assessed the social validity of improvements in participants' target behaviors - 15 used subjective evaluation, 5 used social comparison, and 3 used both subjective evaluation and social comparison methods (Kazdin, 1982). Nearly all data supported the contention that changes in participants' target behaviors were socially valid.

BSM in Inclusive Settings – A Promise Partially Fulfilled

Based on findings from this review, BSM has partially fulfilled its oft-cited promise as an inclusive technique. However, only about half of the 43 studies reviewed here demonstrated moderate to strong efficacy, a few BSM techniques remained underutilized, and limitations plagued many studies.

Proliferation of Category III BSM Studies

Journal publications of Category III BSM studies have proliferated greatly since 1997. McDougall (1998) identified 13 studies published in 8 journals from 1970 to 1997 – a publication rate of about one study every two years. We identified 43 studies published in 26 journals from 1997 to mid-2005 – a publication rate of about five studies per year. Consumers of these journals tend to be professionals in special education and disabilities. No studies of this

type have been published in journals with GE titles. However, researchers have disseminated findings beyond special education to related services disciplines – a pattern not evident in McDougall's previous review. Thus, we recommend further use of BSM in inclusive settings to help students monitor performance of skills acquired via speech, physical therapy, and counseling services. We also recommend that researchers publish studies in journals read primarily by general educators to promote awareness and use of BSM in GE settings.

Malleability of BSM Applications

Our second research question addressed how investigators have applied and diversified BSM techniques in inclusive settings. Since 1997, investigators have (a) applied traditional and novel BSM techniques, and (b) expanded the range of participants (disability and age), settings, and dependent variables. See Table 3. Self-monitoring in various forms continues to be the most frequently used and most versatile BSM technique. Emerging BSM techniques include self-recruitment of reinforcement and variations of self-instruction. Researchers also used BSM in conjunction with functional behavioral assessment, positive behavioral supports, and goal setting, and, thereby, established a trend toward having participants become more active agents in these interventions (e.g., by having students select target behaviors).

We recommend that teachers expand students' use of self-monitoring in inclusive settings because it has the broadest empirical support of all BSM techniques. Moreover, self-monitoring is very versatile. Students can cue themselves to self-monitor via auditory, visual, and covert cues. Self-monitoring also can be combined with other techniques, takes relatively little time and expense to train, and can be faded quite easily. We also recommend that researchers investigate BSM techniques rarely used in Category III studies– tactilely-cued self-monitoring, VSM, and self-graphing.

Tactilely-cued self-monitoring. Tactile cues, such as those produced by vibrating pagers, might be useful for individuals who experience difficulty responding to visual and auditory cues, GE settings in which audio or visual cues might distract other students, and individuals who wish to maintain privacy. Instructional assistants also could use such cues to manage their proximity and prevent problems that arise when they 'hover' excessively near students with disabilities in GE settings. These problems include interfering with general educators' ownership and responsibility of duties toward students with disabilities, promoting students' overreliance upon instructional assistants, and limiting students' opportunities for interaction with peers who do not have disabilities (Giangreco, Edelman, Luiselli, & MacFarland, 1997).

VSM. The paucity of Category III VSM studies is surprising for at least three reasons. First, for more than three decades, findings from studies and literature reviews provide support for the efficacy of self-modeling in various settings, for a wide range of individuals, across many behaviors, (Creer & Miklich, 1970; Dowrick, 1999; Hitchcock, Dowrick, & Prater, 2003; Hosford, 1980; Mehrag & Woltensdorf, 1990; Wert & Nesworth, 2003). Second, guidance is available on using VSM techniques, including positive self-review and video feedforward (Dowrick, 1997; Dowrick & Hood, 1978; Dowrick, Power, Manz, Ginsberg-Block, Leff, & Kim-Rupnow, 2001). Third, video technology has become more accessible and more affordable in recent years. However, VSM requires considerable time and technological effort compared to other BSM techniques. This might limit teachers' willingness to use VSM. Studies illustrate potential use of VSM for students with disabilities in inclusive settings to improve: (a) attention span of preschoolers (Dowrick & Raeburn, 1977); (b) on-task behaviors of students with

behavior disorders (Clare, Jenson, Kehle, & Bray 1986); and (c) talking among students with selective mutism (Blum, et al., 1998; Dowrick & Hood, 1978).

Self-graphing. Graphing is a simple and effective way to provide ongoing visual feedback on performance. For guidance, see two recent studies that combined self-graphing with goal setting and self-monitoring, and: (a) improved daily exercise, body weight, and cardiovascular fitness (McDougall, 2005); and (b) increased writing productivity (McDougall, in press). To maximize the reactive effects of self-graphing, students should: (a) receive systematic training in self-graphing; (b) graph their results consistently, frequently, and immediately after they complete a task; and (c) graph their performance of one or two specific, proactive tasks. Teachers can instruct students about two orientations for interpreting and acting on self-graphed data. In the personal improvement orientation, students aim to improve their performance over time and compare their current performance to their recent performance. In the normative orientation, students aim to improve their performance relative to their peers. Finally, students can post their graphs publicly or privately.

Age and time considerations. We recommend that practitioners show students how to use BSM techniques ‘sooner than later.’ Study findings suggest that students can apply many BSM techniques effectively during the early years of elementary school through young adulthood. Preschoolers might also benefit but additional studies are needed to verify this matter. We also recommend that teachers initiate BSM at the beginning of each school year as part of their classroom routine rather than waiting until problems arise. Claims about ease of use notwithstanding, BSM requires systematic training. Thus, we recommend that practitioners invest time efficiently during initial training. Moreover, practitioners should monitor students periodically, especially during initial use of BSM, to ensure that students use BSM techniques accurately and punctually. Finally, findings suggest that many GE teachers will require support in order to further the promise of BSM as an inclusive technique. Special education teachers can provide such support via direct collaboration with their GE colleagues in inclusive classrooms.

Room for Improvement – Methodological and Procedural Considerations

“Contemporary ABA [applied behavior analysis] standards require investigators to collect and report data that address not only outcomes for dependent variables but also maintenance and generalization of these targeted outcomes, along with social validity and IO agreement” (McDougall, 1998, p. 138). In this review, 38 of 43 studies used ABA or small-N research designs. Most of these studies failed to meet one or more of the aforementioned standards. Nearly one-half of the studies failed to assess social validity and many of studies used only the subjective evaluation method. We concur with Pierce, Reid, and Epstein (2004) that the social comparison method appears to be underutilized. Thus, we recommend that researchers use, when applicable, both the social comparison method and the subjective evaluation method. In addition, many investigators failed to formally assess maintenance and generalization. Five studies failed to report any reliability data and only three investigators used Kappa to adjust IO agreement indices for the probability of chance agreements. Thus, we recommend that investigators meet contemporary standards by reporting data for maintenance, generalization, social validity, and IO agreement. See Cohen (1960) and Kazdin (1982) for guidance on these matters.

A few studies emphasized collaborative research efforts between author-investigators and teacher-practitioners. King-Sears (1999) was notable because of extensive “co-design” (p. 134) efforts between the teacher and researcher. A few other authors presented information about

accommodating teacher preferences or responding to the immediate needs or daily classroom routines of teachers and students. These studies illustrate benefits and challenges of executing collaborative research. In some studies, the give-and-take required was justified. In other studies, methodological rigor was compromised not only by accommodating teachers' preferences, but also by factors investigators could have anticipated. For example, about one-third of the authors reported they could not train all participants, complete intervention phases, or collect maintenance data because the school year ended. Thus, we recommend that investigators schedule their studies accordingly.

Methodological and procedural weaknesses, as well as authors' failures to report such weaknesses, raise concerns. We found that for each author-reported weakness (see superscript plus signs in Table 2), authors failed to report five other weaknesses (see superscript minus signs in Table 2). Thus, we recommend that researchers be vigilant and identify explicitly, in a limitations section, the methodological and procedural weaknesses of their studies. In addition, only one-third of the studies included systematic measures on intervention integrity. Investigators should provide this data because judgments about intervention efficacy are severely limited without clear evidence of intervention integrity.

Most small-N studies adhered to conventions for reporting data. However, graphs in a few studies included basic errors (i.e., data points connected across phase lines and across non-consecutive sessions; graph captions misplaced; graphs without phase lines; no graphs). A few studies omitted indices of central tendency and many studies omitted measures of dispersion for baseline and intervention phases. Some authors did not identify their observational recording systems. Investigators and reviewers should attend carefully to such 'devil-in-the-detail' matters.

Favorable Trends

Most investigators avoided three less-than-desirable trends from earlier Category III BSM studies. First, rather than targeting one dysfunctional behavior for reduction, investigators also aimed concurrently to increase at least one functional behavior. Second, rather than targeting only 'on-task' behavior and assuming that students accrued related benefits, investigators concurrently targeted and evaluated changes in specific academic and social behaviors. Third, most participants were trained initially in GE classrooms. We believe that students will be more successful in GE settings when teachers train students in those settings. This direct approach eliminates many challenges inherent in attempting to generalize behavior from special education or separate training settings to GE classrooms where students are expected to self-manage.

Additional Recommendations for Practitioners and Researchers

We recommend that practitioners and researchers consult findings from Category I and II BSM studies, and studies of self-determination and self-regulated strategy development, where BSM components are incorporated frequently as part of multi-component interventions. See, for example, how to combine goal setting with self-instruction (Johnson, Graham, & Harris, 1997) or self-managed contracts (Martin, Mithaug, Cox, Peterson, Van Dyke, & Cash, 2003). BSM also might be used in conjunction with field-tested self-determination curricula and materials and to bolster goal attainment when using the Choice Maker Self-Determination curriculum (Martin & Huber Marshall, 1998), or corresponding instructional modules, such as Take Action: Making Goals Happen (Huber Marshall, et al, 1999). German, Martin, Huber Marshall, and Sale (2003) directed, "Research also needs to be undertaken to determine if the Take Action process can be successfully taught in an inclusive academic environment to students with and without

disabilities” (p. 35). For guidance on effective use of BSM components with self-regulated strategy development, see Hughes, Ruhl, Schumaker and Deschler’s (2002) study on teaching students with learning disabilities, in GE classes, to improve homework via an assignment completion strategy.

Our findings also suggest that self-instruction is quite effective. This conclusion is consistent with findings from Krosenbergen and Van Luit’s (2004) meta-analysis of mathematics interventions, which deemed self-instruction effective for children with special needs. We also recommend that researchers and practitioners attempt to replicate, in inclusive settings, the positive outcomes that students in non-integrated settings achieved when they used self-correction (Morton, Heward, & Alber, 1998; Okyere, Heron, & Goddard, 1997). We also encourage BSM use in inclusive settings beyond school classrooms. See, for example, Brookman, Boettcher, Klein, Openden, Koegel, and Koegel (2003), who applied BSM as part of a larger strategy that promoted social interactions between children with and without autism in an inclusive day camp. Finally, we recommend that future Category III studies target two classes of behavior that have not yet been targeted effectively in inclusive settings – anger management-violence and health-exercise habits.

Findings from this review reinforce – with qualifications - other authors’ contentions that BSM is a best practice that helps to bridge the research-to-practice gap. Frey and George-Nichols (2003) identified BSM as 1 of 10 best practices interventions and Hughes et al. (1997) validated BSM as one of eight, practitioner-validated, transition support strategies. Gable and Hendrickson (2000) identified BSM as one of seven strategies “that hold promise for improving intervention results for students with a wide range of behavior problems” (p. 288). The authors cautioned that six conditions might limit the utility of BSM in promoting maintenance of behavioral changes and explained how to address these conditions.

Teacher-directed instruction is essential. Effective teachers must provide instruction in the step-by-step process, model each of the steps for the student, and train across multiple stimuli. Such teachers create realistic role-play experiences, give the student feedback on both the quantitative and qualitative aspects of his or her performance, and engineer the social environment so that the student has multiple problem-solving opportunities, for which there is timely and sufficient reinforcement. (p. 289)

We conclude that BSM is a best practice in inclusive settings when students are trained systematically, GE teachers are supported, and procedural integrity is high. Support is critical because teachers throughout the US reported that they lack skills or training to teach BSM (Wehmeyer, Agran, & Hughes, 2000). Moreover, Agran and Alper (2000) indicated that only 28% of GE teachers surveyed reported that they taught BSM to students. Thus, we recommend that teacher preparation programs and professional development include BSM training for GE and special education teachers.

Limitations of Our Review

Findings from this review of Category III BSM interventions are limited in at least two ways. First, we restricted the pool of qualifying studies to articles published in professional journals. Second, we did not calculate meta-analytic indices that would illuminate relations between BSM efficacy and procedural, demographic, and outcome variables. Authors of 41 of 43 studies did not report effect sizes (ES) and most studies had insufficient data to calculate ES. Therefore, we

recommend that investigators report ES or supply sufficient data to calculate such indices. The literature documents advantages and limitations of meta-analysis for small-N research (Kromrey & Foster-Johnson, 1996; Scruggs & Mastropieri, 1998; White, Rusch, Kazdin, & Hartmann, 1989). Moreover, “it is almost always necessary to include some index of effect size or strength of relationship in your Results section” (American Psychological Association, 2001, p. 25).

BSM Resources for Practitioners

Fortunately, many BSM resources are available for practitioners. Individuals can learn how to teach BSM techniques by reading “how to” articles (Alberto & Sharpton, 1987; Daly & Ranalli, 2003; Dunlap, Dunlap, Koegel, & Koegel, 1991; Frith & Armstrong, 1986; Hughes, Ruhl, & Peterson, 1988; Johnson & Johnson, 1999; Lazarus, 1998; Liberty & Paeth, 1990; McConnell, 1999; Schloss, 1987; Swaggart, 1998; Young, West, Li, & Peterson 1997). Dowrick (1991) and Gunter, Miller, Venn, Thomas, and House (2002) describe two BSM techniques – VSM and computer-assisted self-graphing – that have the potential to improve student performance in inclusive GE settings. Additional BSM training materials are available in: books (Agran, 1997; King-Sears, Wehmeyer, & Copeland, 2003); booklets (King-Sears, & Carpenter, 1997); practical guides (Dowrick, 1991); manuals (Koegel, Koegel, & Parks, 1992; Young, West, Smith, & Morgan, 1995); and instructional videos (Dowrick, 1997; McDougall, 2003).

References

Note: (superscripts indicate studies that qualified for this review)

- Agran, M. (1997). *Student directed learning*. Pacific Groves, CA: Brooks/Cole.
- Agran, M., & Alper, S. (2000). Curriculum and instruction in general education: Implications for service delivery and teacher preparation. *Journal of the Association for Persons with Severe Handicaps*, 25, 167-174.
- ¹Agran, M., Blanchard, C., Wehmeyer, M., & Hughes, C. (2001). Teaching students to regulate their behavior: *The differential effects of student- vs. teacher-delivered reinforcement*. *Research in Developmental Disabilities*, 22, 319-332.
- ²Agran, M., Blanchard, C., Wehmeyer, M., & Hughes, C. (2002). Increasing the problem-solving skills of students with developmental disabilities participating in general education. *Remedial and Special Education*, 23(5), 279-288.
- Alberto, P.A., & Sharpton, W. (1987). Prompting strategies that promote student self-management. *Teaching Exceptional Children*, 19(4), 54-57.
- ³Alberto, P.A., Taber, T.A., & Fredrick, L.D. (1999). Use of self-operated auditory prompts to decrease aberrant behaviors in students with moderate mental retardation. *Research in Developmental Disabilities*, 20(6), 429-439.
- Algozinne, B., Browder, D., Karvonen, M., Test, D.W., & Wood, W.M. (2001). Effects of interventions to promote self-determination for individuals with disabilities. *Review of Educational Research*, 71(2), 219-277.
- American Psychological Association. (2001). *Publication Manual of the American Psychological Association*. Washington, DC: Author.
- ⁴Apple, A.L., Billingsley, F., & Schwartz, I.S. (2005). Effects of video modeling alone and with self-management on complement-giving behaviors of children with high-functioning ASD. *Journal of Positive Behavior Interventions*, 7(2), 33-46.
- Barry, L.M., & Haraway, D.L. (2005). Self-management and ADHD: A literature review. *The Behavior Analyst Today*, 6, 48-64.
- Blum, N.J., Kell, R.S., Starr, H.L., Lloyds-Lender, W., Bradley-Klug, K.W., & Osbourne, M.L., et al. (1998). Audio feedforward treatment of selective mutism. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 40-43.
- Brookman, L., Boettcher, M., Klein, A., Openden, D., Koegel, R.L., Koegel, L.K. (2003). Facilitating social interactions in a community summer camp setting for children with autism. *Journal of Positive Behavior Interventions*, 5(4), 249-252.
- ⁵Brooks, A., Todd, A.W., Tofflemoyer, S., & Horner, R.H. (2003). Use of functional assessment and a self-management system to increase academic engagement and work completion. *Journal of Positive Behavior Interventions*, 5(3), 144-152.
- ⁶Bryan, T., & Sullivan-Burstein, K. (1998). Teacher-selected strategies for improving homework completion. *Remedial and Special Education*, 19(5), 263-275.
- ^{7,8,9}Buggey, T. (1999). Video self-modeling applications with students with autism spectrum disorders in a small private school setting. *Focus on Autism and Other Developmental Disabilities*, 20(1), 52-63.
- Christie, D.J., Hiss, M., & Lozanoff, B. (1984). Modification of inattentive classroom behavior: Hyperactive children's use of self-recording with teacher guidance, *Behavior Modification*, 8, 391-406.
- Clare, S.K., Jenson, W.R., Kehle, T.J., & Bray, M.A. (2000). Self-modeling as a treatment for

- increasing on-task behavior. *Psychology in the Schools*, 37(6), 517-522.
- Clees, T.J. (1994-5). Self-recording of students' daily schedules of teachers' expectancies: Perspectives on reactivity, stimulus control, and generalization. *Exceptionalities*, 5, 113-119.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37-46.
- ¹⁰Copeland, S.R., Hughes, C., Agran, M., Wehmeyer, M.L., & Fowler, S.E. (2002). An intervention package to support high school students with mental retardation in general education classrooms. *American Journal on Mental Retardation*, 107(1), 32-45.
- ¹¹Craft, M.A., Alber, S.R., & Heward, W.L. (1998). Teaching elementary students with developmental disabilities to recruit teacher attention in a general education classroom: Effects on teacher praise and academic productivity. *Journal of Applied Behavior Analysis*, 31, 399-415.
- Creer, T.L., & Miklich, D.R. (1970). The application of a self-modeling procedure to modify inappropriate behavior: A preliminary report. *Behaviour Research and Therapy*, 8, 91-92.
- ¹²Crum, C.F. (2004). Using a cognitive-behavior modification strategy to increase on-task behavior of a student with a behavior disorder. *Intervention in School and Clinic*, 39(5), 305-309.
- ¹³Dalton, T., Martella, R.C., & Marchand-Martella, N.E. (1999). The effects of a self-management program in reducing off-task behavior. *Journal of Behavioral Education*, 9(3/4), 157-176.
- Daly, P.M., & Ranailli, P. (2003). Using countoons to teach self-monitoring skills. *Teaching Exceptional Children*, 35(5), 30-35.
- ¹⁴Davies, S., & Witte, R. (2000). Self-management and peer-monitoring within a group contingency to decrease uncontrolled verbalizations of children with attention-deficit/hyperactivity disorder. *Psychology in the Schools*, 37(2), 135-147.
- Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- DiGangi, S.A., Maag, J.W., & Rutherford, R.B. (1991). Self-graphing of on-task behavior: Enhancing the reactive effects of self-monitoring of on-task behavior and academic performance. *Learning Disability Quarterly*, 14, 221-230.
- Dowrick, P.W. (1991). *Practical guide to using video in the behavioral sciences*. New York: Wiley Interscience.
- Dowrick, P.W. (1997). *A sampler of self-modeling, feedforward, and other video features* [video]. Auckland CCS and Children's Seashore House (Philadelphia).
- Dowrick, P.W. (1999). A review of self-modeling and related interventions. *Applied and Preventative Psychology*, 8, 23-39.
- Dowrick, P.W., & Hood, M. (1978). Transfer of talking behaviours across settings using faked films. In E.L. Glynn & S.S. McNaughton (Eds.), *Proceedings of the New Zealand Conference for Research in Applied Behaviour Analysis*. Auckland, New Zealand: University of Auckland Press.
- Dowrick, P.W., Power, T.J., Manz, P.H., Ginsberg-Block, M. Leff, S.S., & Kim-Rupnow, W.S. (2001). Community responsiveness: Examples from under-resourced urban schools. *Journal of Prevention and Intervention in the Community*, 21(2), 71-90.
- Dowrick, P.W., & Raeburn, J.M. (1977). Video editing and medication to produce a therapeutic self-model. *Journal of Consulting and Clinical Psychology*, 45, 1156-1158.
- Dunlap, L.K., Dunlap, G., Koegel, L.K., & Koegel, Robert, L. (1991). Using self-monitoring to increase independence. *Teaching Exceptional Children*, 23(3), 17-22.

- ¹⁵DuPaul, G.J., McGoey, K.E., & Yugar, J.M. (1997). Mainstreaming students with behavioral disorders: The use of classroom peers as facilitators of generalization. *School Psychology Review*, 26(4), 634-650.
- Edwards, L., Salent, V., Howard, V.F., Brouger, J., & McLaughlin, T.F. (1995). Effectiveness of self-management of attentional behavior and reading comprehension for children with attention deficit disorder. *Child and Family Behavior Therapy*, 17(2), 1-17
- Falk, G.D., Dunlap, G., & Kern, L. (1996). An analysis of self-evaluation and videotape feedback for improving the peer interactions of students with externalizing and internalizing behavioral problems. *Behavioral Disorders*, 21, 261-276.
- Frey, A., & George-Nichols, N. (2003). Intervention practices for students with emotional and behavioral disorders: Using research to inform school social work practice. *Intervention Research*, 25(2), 97-104.
- Frith, G.H., & Armstrong, S.W. (1986). Self-monitoring for behaviorally disordered students. *Teaching Exceptional Children*, 18, 144-148.
- Gable, R.A., & Hendrickson, J.M. (2000). Strategies for maintaining positive behavior change stemming from functional behavioral assessment in schools. *Education and Treatment of Children in Schools*, 23(3), 286-297.
- ¹⁶Gansle, K.A., & McMahon, C.M. (1997). Component integrity of teacher intervention management behavior using a student self-monitoring treatment: An experimental analysis. *Journal of Behavioral Education*, 7(4), 405-419.
- Gardner, W.I., Clees, T.J., & Coles, C.L. (1983). Self-management of disruptive verbal Ruminations by a mentally retarded adult. *Applied Research in Mental Retardation*, 4, 41-58.
- German, S.L., Martin, J.E., Huber Marshall, L., & Sale, R.P. (2003). Promoting self-determination: Using Take Action to teach goal attainment. *Career Development for Exceptional Individuals*, 23(1), 27-38.
- ¹⁷Gertz, J. (2000). *Evaluating behavioral treatment of disruptive classroom behaviors of an adolescent with autism*. *Research on Social Work Practice*, 10(1), 98-110.
- Giangreco, M.F., Edelman, S.W., Luiselli, T.E., MacFarland, S.Z.C. (1997). Helping or hovering? Effects of instructional assistant proximity on students with disabilities. *Exceptional Children*, 64(1), 7-18.
- ¹⁸Gilberts, G.H., Agran, M., Hughes, C., & Wehmeyer, M. (2001). The effects of peer delivered self-monitoring strategies on participation of students with severe disabilities in general education classrooms. *Journal of the Association for Persons with Severe Handicaps*, 26(1), 25-36.
- Glynn, E.L., Thomas, J.D., & Shee, S.M. (1973). Behavioral self-control of on-task behavior in an elementary classroom. *Journal of Applied Behavior Analysis*, 6, 105-113.
- Graham, S., Harris, K.R., & Troia, G.A. (2000). Self-regulated strategy development revisited: Teaching writing strategies to struggling writers. *Topics in Language Disorders*, 20(4), 1-14.
- ¹⁹Gregory, K.M., Kehle, T.J., & McLoughlin, C.S. (1997). Generalization and maintenance of treatment gains using self-management procedures with behaviorally disordered adolescents. *Psychological Reports*, 80, 683-690.
- Grossi, T.A., & Heward, W.L. (1998). Using self-evaluation to improve the work productivity of trainees in a community-based restaurant training program. *Education and Training in Mental Retardation and Developmental Disabilities*, 33(3), 248-263.

- ²⁰Gumpel, T.P., & David, S. (2000). Exploring the efficacy of self-regulatory training as a possible alternative to social skills training. *Behavioral Disorders*, 25(2), 131-141.
- Gunter, P.L., Miller, K.A., Venn, M.L., Thomas, K., & House, S. (2002). Self-graphing to success: Computerized data management. *Teaching Exceptional Children*, 35(2), 30-34.
- Hallahan, D.P., Marshall, K.D., & Lloyd, J.W. (1981). Self-recording during group instruction: Effects on attention to task. *Learning Disabilities Quarterly*, 4, 407-413.
- Hitchcock, C.H., Dowrick, P.A., & Prater, M.A. (2003). Video self-modeling in school-based settings: A review. *Remedial and Special Education*, 24(1), 36-45, 56.
- ²¹Hoff, K.E., & DuPaul, G.J. (1998). Reducing disruptive behavior in general education classrooms: The use of self-management strategies. *School Psychology Review*, 27(2), 290-303.
- Hogan, S., & Prater, M.A. (1993). The effects of peer tutoring and self-management training on on-task, academic, and disruptive behaviors. *Behavioral Disorders*, 18, 118-128.
- Hosford, R.E. (1980). Self-as-a-model: A cognitive, social-learning technique. *Counseling Psychology*, 9(1), 45-62.
- Huber Marshall, L., Martin, J.E., Maxson, L.L., Hughes, W., Miller, T.L., McGill, T., & Jerman, P. (1999). *Take action: Making goals happen*. Longmont, CO: Sopris West.
- ²²Hughes, C., Copeland S.R., Agran, M., Wehmeyer, M.L., Rodi, M.S., & Pressley, J.A. (2002). Using self-monitoring to improve performance in general education high school classes. *Education and Training in Mental Retardation and Developmental Disabilities*, 37(3), 262-272.
- ^{23,24}Hughes, C.A., Fowler, S.E., Copeland, S.R., Agran, M., Wehmeyer, M.L., & Church-Pupke, P.P. (2004). *Supporting high school students to engage in recreational activities with peers*. *Behavior Modification*, 28(1), 3-27.
- Hughes, C.A., Kim, J.H., Bogseon, H., Killian, D.J., Fischer, G.M., & Brock, M.G., et al. (1997). Practitioner-validated secondary transition support strategies. *Education and Training in Mental Retardation and Developmental Disabilities*, 32(3), 201-212.
- Hughes, C.A., Ruhl, K.L., & Misra, A. (1989). Self-management with behaviorally disordered students in school settings: A promise unfulfilled? *Behavioral Disorders*, 14, 250-262.
- Hughes, C.A., Ruhl, K.L., & Peterson, S.K. (1988). Teaching self-management skills: Promising practices. *Teaching Exceptional Children*, 20(2), 70-72.
- Hughes, C.A., Ruhl, K.L., Schumaker, J.B., Deschler, D.D. (2002). Effects of instruction in an assignment completion strategy on the homework performance of students with learning disabilities in general education classes. *Learning Disabilities: Research & Practice*, 17(1), 1-18.
- ²⁵Hughes, C., Rung, L.L., Wehmeyer, M.L., Agran, M., Copeland, S.R., & Hwang, B. (2000). Self-prompted communication book use to increase social interaction among high school students. *Journal of the Association for Persons with Severe Handicaps*, 25(3), 153-166.
- ²⁶Hutchinson, S.W., Murdock, J.Y., Williamson, R.D., & Cronin, M.E. (2000). Self-recording PLUS encouragement equals improved behavior. *Teaching Exceptional Children*, 32(5), 54-58
- ²⁷Jindal-Snape, D. (2004). Generalization and maintenance of social skills of children with visual impairments: Self-evaluation and the role of feedback. *Journal of Visual Impairment and Blindness*, 98, 470-483.
- Johnson, L.A., Graham, S., & Harris, K.R. (1997). The effects of goal setting and self-instruction on learning a reading comprehension strategy: A study of students with learning disabilities. *Journal of Learning Disabilities*, 30(1), 80-91.
- Johnson, L.R., & Johnson, C.E. (1999). Teaching students to regulate their own behavior.

- Teaching Exceptional Children*, 31(4), 6-10.
- Kanfer, F.H., & Karoly, P. (1972a). A behavioristic excursion into the lion's den. *Behavioral Therapy*, 3, 398-416.
- Kanfer, F.H., & Karoly, P. (1972b). Self-regulation and its clinical application: Some additional considerations. In R.C. Johnson, P.R. Dokecki, & O.H. Mowrer (Eds.), *Conscience, contract and social reality* (pp. 428-437). New York: Holt, Rinehart & Winston.
- Kazdin, A.E. (1982). *Single-case research designs: Methods for clinical and applied settings*. New York: Oxford University Press.
- ²⁸King-Sears, M.E. (1999). Teacher and researcher co-design self-management content for an inclusive setting: Research training, intervention, and generalization effects on student performance. *Education and Training in Mental Retardation and Developmental Disabilities*, 34(2), 134-156.
- King-Sears, M.E., & Carpenter, S. (1997). *Teaching self-management to elementary students with developmental disabilities*. Innovations: American Association on Mental Retardation, Research to Practice Series, n11, 59 pp. American Association on Mental Retardation, 444 North Capitol Street, NW, Suite 846, Washington, DC 20001-1512.
- King-Sears, M.E., Wehmeyer, M.L., & Copeland, S.R. (2003). *Teacher's series on inclusive practices: Student-directed learning*. Baltimore, MD: Paul H. Brookes.
- ²⁹Koegel, L.K., Harrower, J.K., & Koegel, R.L. (1999). Support for children with developmental disabilities in full-inclusion classrooms through self-management. *Journal of Positive Behavioral Interventions*, 1(1), 26-34.
- Koegel, L.K., Koegel, R.L., & Parks, D.R. (1992). *How to teach self-management skills to people with severe disabilities: A training manual*. Santa Barbara: University of California.
- Krosenbergen, E.H., & Van Luit, E.H. (2004). Mathematics interventions for children with special education needs: A meta-analysis. *Remedial and Special Education*, 24(3), 97-114.
- Kromrey, J.D., & Foster-Johnson, L. (1996). Determining the efficacy of intervention: The use of effect sizes for data analysis in single-subject research. *Journal of Experimental Education*, 65(1), 73-93.
- Lancioni, G.E., & O'Reilly, M.F. (2001). Self-management of instruction cues for occupation: Review of studies with people with severe and profound developmental disabilities. *Research in Developmental Disabilities*, 22, 41-65.
- Lazarus, B.D. (1998). Say cheese! Using personal photographs as prompts. *Teaching Exceptional Children*, 30(6), 4-7.
- Liberty, K.A., & Paeth, M.A. (1990). Self-recording for students with severe and multiple handicaps. *Teaching Exceptional Children*, 22(3), 73-75.
- Lonnecker, C., Brady, M.P., McPherson, R. & Hawkins, J. (1994). Video self modeling and cooperative classroom behavior in children with learning and behavior problems: Training and generalization effects. *Behavioral Disorders*, 20(1), 24-34.
- Martin, J.E., & Huber Marshall, L. (1998). Choice maker: Choosing, planning, and taking action. In Sands, D.E. & Wehmeyer, M.L. (Eds.), *Making it happen* (pp. 211-240). Baltimore, MD: Paul Brooks.
- Martin, J.E., & Mithaug, D. (1986). Advancing a technology of self-control. *British Columbia Journal of Special Education*, 10(2), 93-100.
- Martin, J.E., Mithaug, D.E., Cox, P., Peterson, L.Y., Van Dycke, L.Y., & Cash, M.E. (2003).

- Increasing self-determination: Teaching students to plan, work, evaluate, and adjust. *Exceptional Children*, 69(4), 431-447.
- ³⁰Massey, N.G., & Wheeler, J.J. (2000). Acquisition and generalization of activity schedules and their effects on task engagement in a young child with autism in an inclusive pre-school classroom. *Education and Training in Mental Retardation and Developmental Disabilities*, 35(3), 326-335.
- McConnell, M.E. (1999). Self-monitoring, cueing, recording, and managing: Teaching students to manage their own behavior. *Teaching Exceptional Children*, 32(2), 14-21.
- McDougall, D. (1998). Research on self-management techniques used by students with disabilities in general education settings: A descriptive review. *Remedial and Special Education*, 19(5), 310-320.
- McDougall, D. (2003). *Teaching elementary students how to manage their own behavior: A training video* [Videocassette]. Available via mcdougal@hawaii.edu. DMCD-BSM, 124, Wist Hall, University of Hawai'i, Honolulu, HI 99822
- McDougall, D. (2005). The range-bound changing criterion design. *Behavioral Interventions*, 20, 1-9.
- McDougall, D. (in press). The distributed criterion design. *Journal of Behavioral Education*.
- ³¹McDougall, D., & Brady, M.P. (1998). Initiating and fading self-management interventions to increase math fluency in general education classes. *Exceptional Children*, 64(2), 151-166.
- McLaughlin, T.F. (1976). Self-control in the classroom. *Review of Educational Research*, 46, 631-663.
- Meichenbaum, D. (1977). *Cognitive behavior modification*. New York: Plenum Press.
- Mehrag, S.S., & Woltersdorf, M.A. (1990). Therapeutic use of videotape self-modeling: A review. *Advances in Behaviour Research and Therapy*, 12, 85-99.
- Mertens, D.M. (1998). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches*. Thousand Oaks, CA: Sage.
- ³²Mitchem, K.J., Young, K.R., West, R.P., & Benyo, J. (2001). CWPASM: A classwide peer-assisted self-management program for general education classroom. *Education and Treatment of Children*, 24(2), 111-140.
- ³³Monda-Amaya, L.E., Dieker, L., & Reed, F. (1998). Preparing students with learning disabilities to participate in inclusive classrooms. *Learning Disabilities Research and Practice*, 13(3), 171-182.
- Mooney, P., Ryan, J.B., Uhing, B.M., Reid, R., & Epstein, M.H. (2005). A review of self-management interventions targeting academic outcomes for students with emotional and behavioral disorders. *Journal of Behavioral Education*, 14(3), 203-221.
- Morton, W.L., Heward, W.L., & Alber, S.R., (1998). When to self-correct?: A comparison of two procedures on spelling performance. *Journal of Behavioral Education*, 8(3), 321-335.
- Nelson, J.R., Smith, D.J., Young, R.K., & Dodd, J.M. (1991). A review of self-management outcome research conducted with students who exhibit behavior disorders. *Behavioral Disorders*, 16(3), 169-179.
- Okyere, B.A., Heron, T.E., & Goddard, Y. (1997). Effects of self-correction on the acquisition, maintenance, and generalization of written spelling of elementary school children. *Journal of Behavioral Education*, 7(1), 51-69.
- O'Leary, S.G., & Duby, D.R. (1979). Applications of self-control procedures by children: A review. *Journal of Applied Behavior Analysis*, 12(3), 449-465.
- ³⁴O'Reilly, M.O., Tiernan, R., Lancioni, G., Lacey, C., Hillery, J., & Gardiner, M. (2002). Use of self-monitoring and delayed feedback to increase on-task behavior in a post-

- institutionalized child within regular classroom settings. *Education and Treatment of Children*, 25(1), 91-102.
- Osborne, S.S., Kiburz, C.S., & Miller, S.R. (1986). Treatment of self-injurious behavior using Self-control techniques with a severely behaviorally disordered adolescent. *Behavioral Disorders*, 12, 60-67.
- Palmer, S.B., & Wehmeyer, M.L., (2003). Promoting self-determination in early elementary school: Teaching self-regulated problem-solving and goal-setting skills. *Remedial and Special Education*, 24(2), 115-126.
- Pierce, C.D., Reid, R., & Epstein, M.H. (2004). Teacher-mediated interventions for children with EBD and their academic outcomes: A Review. *Remedial and Special Education*, 25(3), 175-188.
- ³⁵Possell, L.E., Kehle, T.J., McLoughlin, C.S., & Bray, M.A. (1999). Self-modeling as an intervention to reduce disruptive classroom behavior. *Cognitive and Behavioral Practice*, 6, 99-105
- Post, M., & Storey, K. (2002). Review of auditory prompting systems in persons who have moderate to severe disabilities. *Education and Training in Mental Retardation and Developmental Disabilities*, 33(2), 131-143.
- Prater, M.A., Hogan, S., & Miller, S.R. (1992). Using self-monitoring to improve on-task behavior and academic skills of an adolescent with mild handicaps across special and regular education settings. *Education and Treatment of Children*, 15, 43-55.
- Prater, M.A., Joy, R., Chilman, B. Temple, J., & Miller, S.R. (1991). Self-monitoring of on-task behavior by adolescents with learning disabilities. *Learning Disabilities Quarterly*, 14, 164-177.
- Rachlin, H. (1974). Self-control. *Behaviourism*, 2, 94-107.
- Rhode, G., Morgan, D.P., & Young, K.R. (1983). Generalization and maintenance of treatment Gains from resource rooms to regular classrooms using self-evaluation procedures. *Journal of Applied Behavior Analysis*, 16, 171-188.
- Rock, M.L. (2005). Use of strategic self-monitoring to enhance academic engagement, productivity, and accuracy of students with and without exceptionalities. *Journal of Positive Behavior Interventions*, 7(1), 3-17.
- Rooney, K.J., Hallahan, D.P., & Lloyd, J.W. (1984). Self-recording of attention by learning disabled students in the regular classroom. *Journal of Learning Disabilities*, 17, 360-364.
- Rosenbaum, M.S., & Drabman, R.S. (1979). Self-control training in the classroom: A review and critique. *Journal of Applied Behavior Analysis*, 12, 467-485.
- Schloss, P. (1987). Self-management strategies for adolescents entering the work force. *Teaching Exceptional Children*, 19(9), 39-43.
- Scruggs, T.E., & Mastropieri, M.A. (1998). Summarizing single-subject research: Issues and applications. *Behavior Modification*, 22(3), 221-242.
- Skiba, R., & Casey, A. (1985). Interventions for behaviorally disordered students: A quantitative review and methodological critique. *Behavioral Disorders*, 10, 239-252.
- Skinner, B.F. (1953). *Science and human behavior*. New York: Macmillan.
- ³⁹Snyder, M.C., & Bambara, L.M. (1997). Teaching secondary students with learning disabilities to self-manage classroom survival skills. *Journal of Learning Disabilities*, 30(5), 534-543.
- Stage, S.A., & Quiroz, D.R. (1997). A meta-analysis of interventions to decrease disruptive classroom behavior in public education settings. *School Psychology Review*, 26, 333-368.
- Swaggart, B.L. (1998). Implementing a cognitive behavior management plan. *Intervention in School and Clinic*, 33(4), 235-238.

- ⁴⁰Thiemann, K.S., & Goldstein, H. (2001). Social stories, written text cues, and video feedback: Effects on social communications of children with autism. *Journal of Applied Behavior Analysis*, 34, 425-446.
- Thoreson, C.E., & Mahoney, M.J. (1974). *Behavioral self-control*. New York: Holt.
- ⁴¹Todd, A.W., Horner, R.H., & Sugai, G. (1999). Self-monitoring and self-recruited praise: Effects on problem behavior, academic engagement, and work completion in a typical classroom. *Journal of Positive Behavior Interventions*, 1(2), 66-76, 122.
- Trammel, D.L., Schloss, P.T., & Alper, S. (1994). Using self-recording, evaluation, and graphing to increase completion of homework assignments. *Journal of Learning Disabilities*, 27, 75-81.
- ⁴²Uberti, H.Z., Mastropieri, M., & Scruggs, T.E. (2004). Check it off: Individualizing a math algorithm for students with disabilities via self-monitoring checklists. *Intervention in School and Clinic*, 39(5), 269-275.
- Wehmeyer, M.L., Agran, M., & Hughes, C. (2000). A national survey of teachers' promotion of self-determination and student-directed learning. *Journal of Special Education*, 34, 58-68.
- ⁴³Wehmeyer, M.L., Yeager, D., Bolding, N., Agran, M., & Hughes, C. (2003). The effects of self-regulation strategies on goal attainment for students with developmental disabilities in general education classrooms. *Journal of Developmental and Physical Disabilities*, 15(1), 79-91.
- Wert, B.Y., & Neisworth, John T. (2003). Effects of video self-modeling on spontaneous requesting in children with autism. *Journal of Positive Behavior Interventions*, 5(1), 30-34.
- White, O.R., Rusch, F.R., Kazdin, A.E., & Hartman, D.P. (1989). Applications of meta analysis in individual-subject research. *Behavioral Assessment*, 11, 281-296.
- Wolery, M., & Schuster, J.W. (1997). Instructional methods with students who have significant disabilities. *Journal of Special Education*, 31(4), 61-79.
- Workman, E.A., & Hector, M.A. (1976). Behavioral self-control in classroom settings: A review of the literature. *Journal of School Psychology*, 16, 227-236.
- Young, K.R., West, R.P., Li, L., & Peterson, L. (1997). Teaching self-management skills to students with learning and behavior problems. *Reclaiming Children and Youth*, 6(2), 90-96.
- Young, K.R., West, R.P., Smith, D.J., & Morgan, D.P. (1995). *Teaching self-management strategies to adolescents*. Longmont, CO: Sopris West.

Table 1
Descriptive Data for Category III Behavioral Self-Management Studies

Authors, Year	Participants	Setting	Dependent Variable	DV Measurement	Independent Variable	Research Design
Agran, Blanchard, Wehmeyer & Hughes, 2002	3F, 1M Grades 7 to 8 1 autism, 2 intellectual disabilities, 1 multiple disabilities	GE Science GE Life Skills GE English	- appropriate touching - follow directions - contribute to class (respond to peers'/teachers' questions)	% of correct responses observed during teacher-created opportunities	problems strategy (self-determined learning model of instruction) incl: goal setting & take action plan w/self-selected goals, S-M, S-I, S-E	multiple baseline across participants using ABC
Agran, Blanchard, Wehmeyer & Hughes, 2001	6M Grades 10 to 11 1 LD, 2 intellectual disabilities, 1 visual impairments, 1 visual+hearing+orthopedic disability, & 1 other health impairment	GE English GE Agricultural Mechanics GE History GE Agricultural Biology	- organizational skills (e.g., carry planner to class, record and turn in assignments) - social skills/ initiating conversations	% of correct responses observed	problem-solving strategy (self-determined learning model of instruction) incl: goal setting & take action plan w/self-selected goals, S-M, adjust goal/plan, S-E, S-R, S-I	multiple baseline across groups of participants using ABCD
Alberto, Taber & Fredrick, 1999	1F, 1M Age 19 Moderate MR	public library, fast food restaurant; HS hallway, neighborhood street	inappropriate (aberrant) vocalizations	% of 20-second intervals	self-operated auditory prompting system (S-I)	multiple-probe across settings w/ one reversal phase, plus fading
Apple, Billingsley & Schwartz, 2005 (Study 2)	2M, 1F Age 4 to 5 2 Asperger 1 Autism	free play at integrated preschool & kindergarten	Complements: - initiations - responses	# occurrences per 15-minute observation period	- view video of peer models - teacher & visually cued self-recording - verbal & tangible reinforcement	multiple baseline across participants

Brooks, Todd, Tofflemeyer & Horner, 2003	1F Age 10 Mild MR & Down syndrome	seatwork: • GE grade 4 • SPED resource Group instruction: SPED resource	• academic engagement (on-task) • work completion	• % of 10-sec. whole intervals • finish assignment by period end, yes/no	S-M & self-recruited reinforcement, token reinforcement & general case instruction	multiple baseline w/ABCAC & two AC
Bryan & Sullivan-Burstein, 1998 (Study 3)	123, M/F not spec Grades 1 to 6 4 grps incl LD vs Ave. Achieving x w/ vs w/o hmwk completion problems	inclusive GE classrooms	homework completion in: • math • spelling	# completed homework assignments divided by total # homework assignments = proportion	self-graphing of homework completion (following prior homework interventions)	3-factor MANOVA group (LD v average achvng), homework problems (yes, no), graphing (yes, no)
Buggey, 2005 (Study 1)	2M Age 9 and 11 1 autism 1 mild autism/Asperger	lunch, recess & free time at an integrated private school	social (appropriate verbal) initiations to peers and staff	# occurrences	video self-modeling	multiple baseline across participants using ABC
Buggey, 2005 (Study 2)	2M Age 6 and 8 1 Asperger 1 autism	academic instruction in classroom at an integrated private school	tantrums	• duration • "rate" but only reported limited occurrence data	video self-modeling	multiple baseline across participants using ABC & follow up
Buggey, 2005 (Study 3)	1M Age 5 Pervasive developmental delay	circle, center & free time at an integrated private school	• pushing classmates • expressive language	• occurrences • occurrences	video self-modeling	multiple baseline across behaviors using ABC
Copeland, Hughes, Agran, Wehmeyer & Fowler, 2002	3 F, 1 M Ages 14, 15, 17 (2) 2 MR w/speech/language 2 MR	GE cosmetology classes	worksheet completion tasks (& S-M steps & goal-evaluation steps)	% of tasks performed (& % S-M steps performed & # goal evaluation steps performed)	S-M, goal setting instruction, self-selected goals, S-E, assignment completion instruction & modified worksheets	Multiple baseline across participants with ABCDE
Craft, Alber & Heward, 1998	3M, 1F Ages 10 to 11 Developmental disabilities	• SPED classroom • GE homeroom/spelling	• Student recruiting of teacher attention • Teacher praise • Spelling worksheet compl'n • Spelling work-	• # occurrences • # occurrences • % of items $\geq$ 50% complete • % of answers correct (# correct answers/	Recruitment training incl: instruction & role playing, morning prompts (w/ & w/o teacher assistance & visually cued S-M), & end-	Multiple baseline across participants using ABCDE

			sheet accuracy	total # items completed x 100%)	of-day check and reward (w & w/o external reinf)	
Crum, 20004	1 M Age 8 Behavior disorders	GE handwriting and phonics seatwork	on-task	# (and %) of 10-second partial intervals	visually and teacher-cued S-M w/ & w/o goal setting & reinforcement	ABC
Dalton, Martella & Marchand-Martella 1999	2M Ages 14 to 15 1 LD in written language 1 LD in math	• GE science • GE lang. arts • GE social stds • “learning opportunity center” = SPED/at-risk study hall	• Off-task behavior (e.g., out-of-seat, interrupting others) • Teacher ratings of classroom behavior	• % of 30-sec. partial intervals • 1 – 5 rating scale	S-M & self-evaluation w/ teacher matching, token reinforcement & adult feedback	Multiple baseline across settings using ABC
Davies & Witte, 2003	2M+2 F w/disab + 4 teacher-selected “matched controls” w/o disabilities Ages 8 to 10 ADHD	GE 3 rd grade class during lesson/work time	inappropriate verbalizations	Frequency, event recording	Individual & group S-M within a group contingency	ABAB with “teacher-selected matched controls”
DuPaul, McGoey & Yugar, 1997	2M Age 11 SED (also 2 GE peer “buddy” evaluators)	• self-contained class for students w/ SED • GE science • GE math	• pos/neg class behaviors • multiple secondary DVs (e.g., social skills, socio-metric status, self-esteem)	• % of 6-second partial intervals • multiple teacher & student ratings, e.g., SSRS subscale scores; standardized liking scores	token reinf: • teacher-mediated S-E & token reinf. • peer-mediated S-E & token reinf.	Multiple baseline across participants w/ ABCD; also AB case study for GE peer buddies
Gansele & McMahon, 1997	31 M, 18 F Grades 3 to 6 w/ mean age 10.4 22 “mildly educationally disabled	GE 3 rd through 6 th grade classrooms	“three teacher measures and two student measures” of students’ social skills, positive and negative classroom behaviors	Pre-Post teacher ratings of students on: 1. Conners Abbreviated Symptom Questionnaire; 2. Social Skills Rating System; 3. two teacher-selected	3 levels of integrity of S-M program: • S-M only • S-M with feedback & reward • S-M with feedback & reward, plus graphing	3 (treatment level) x 2 (time=pre-post) factorial with repeated measures MANOVA

				behaviors from Common Classroom Behavior Rating Scale Pre-Post Student: 1. self-ratings on Social Skills Rating System; 2. frequency counts of teacher-selected target behaviors		
Gerdtz, 2000	1M Age 16 Autism	“general education and special education classrooms” (lacks description)	• Level of problem behavior during school day • Mild/severely disruptive, off-task, & appropriate behavior	• daily, end-of-day data sheet w/ 1-4 self-rating by student w/ tchr verification • % of observed behs. using Student Tchr Interaction Profile alternate 15-sec code student then teacher behs.	environmental manipulations, “self-monitoring” (actually S-E) w/ adult review, relaxation training, staff training	“uncontrolled case study” (p. 100)
Gilberts, Agran, Hughes & Wehmeyer 2001	3F, 2M Ages 12 to 15 Severe intellectual disability	GE Spanish GE History GE Art GE Reading	• 11 classroom survival skills • S-M accuracy	• % occurrence • % agreement	S-M: peer taught & peer tutors	Multiple baseline across participants w/ABC
Gregory, Kehle & McLoughlin, 1997	2M, 1F Ages 13 to 14 “behaviorally disorder”	GE classrooms, hallway, gym; plus SPED classrooms	• off-task • self-perceived competence	• % of 15-sec. partial intervals • Piers-Harris Self-Concept Scale, pre-post • “self-concept” self-rated 1/wk	self-evaluation (matching ratings of students & teacher) + token reinforcement	“ABAB” (p.685) but graphs not presented; text identifies additional phases; has features of a changing conditions design
Gumpel & David, 2000	3M Age 9 to 10.5 severe behavioral	playground during morning and afternoon recess at elem.	• positive interactions • negative	% of observations using 10-second fixed interval time	audio-cued S-M with and w/o performance	multiple baseline across participants w/ ABC

	disorders	school in Tel Aviv, Israel	interactions (e.g., speak/play w/ peers w/ or w/o aggressive acts)	sampling	feedback	
Hoff & DuPaul, 1998	2M, 1F Age 9 ODD &/or ADHD	• GE Math • GE Social Studies • GE Reading • Recess	• disruptive behavior • teachers' perceptions of disruptive & aggressive behavior • adverse side-effects of intervention	• % of 15-sec partial intervals • aggression subscale of Iowa Conners Teacher Rating Scale • side-effects rating scale	sequential interven- tion: teacher ratings w/token reinf & feedback; S-E w/teacher matching, token reinf. & feedback; S-E w/ fade feedback & fade matching	Multiple probe across settings using ABCD
Hughes, Copeland, Agran, Wehmeyer, Rodi & Pressley, 2002	1F, 3M Ages 19(2)&16(2) MR w/ hearing impairment, MR w/ autism, & MR (2)	GE Occupational Health; SPED class & GE auto mecha- nics; hallway; SPED class & GE physical education	• head up during peer interact'ns • social response ("Thank you.") • write answers • initiate/obtain peer interact'ns	• % of intervals • % of oppor- tunities • % correct • % of intervals	various individu- alized visually-cued S-M (e.g., w/ picture prompt card)	Multiple baseline across participants w/ABC
Hughes, Fowler, Copeland, Agran, Wehmeyer & Church-Pupke, 2004 (Study 1 = Period 1)	1F, 1M Age 14 & 15 1 MR w/ speech & articulation impair- ments; 1 MR w/ lan- guage impairments	GE physical education class in gymnasium, 1 st period of day	• engagement in recreational activities w/peers • quality of interactions • self-prompting steps performed • recreational activity steps performed	• % of 5-second partial intervals • Likert scale rating • % via observation checklist • % via observation checklist	Multi-component training: asses goals; self-prompt using a picture book (visually cued S-I); program common stimuli; adult-cued self-evaluation of daily goals and daily performance	Multiple baseline across participants w/ ABC
Hughes, Fowler, Copeland, Agran, Wehmeyer & Church-Pupke, 2004 (Study 2 = Period 2)	3F Age 14, 18 & 18 3 MR including 1 w/ language impairments	GE physical education class in gymnasium, 2 nd period of day	• engagement in recreational activities w/peers • quality of interactions • self-prompting	• % of 5-second partial intervals • Likert scale rating • % via observation checklist	Multi-component training: assess goals; self-prompt using a picture book (visually cued S-I); program common stimuli; adult-cued self-evaluation of	Multiple baseline across participants w/ ABC

			- steps performed - recreational activity steps performed	% via observation checklist	daily goals and daily performance	
Hughes, Rung, Wehmeyer, Agran, Copeland & Hwang 2000	4M, 1F Age 16 to 18 MR, and MR w/various speech-language/hearing impairment & autistic-like behavior	“various locations in participants’ classrooms and the school lunchroom” & school gym	- Initiate appropriate conversation - Self-prompting - Initiate in/appropriate conversation (participant), or response (partner) - Conversation topics	- rate= #/minute % of 10-sec partial intervals % of 10-sec partial intervals - mean # per session	self-prompted use of communication book, trained by GE peers	Multiple baseline across participants w/ ABC plus follow-up and multiple probe component
Hutchinson, Murdock, Williamson & Cronin, 2000	1 M Age 6 “emotionally disturbed/behavior disordered ... hyperactivity”	GE grade 1 advanced reading class	- on-task beh’s - latency starting work “nondisruptive behaviors”	# of behaviors - time (min/sec) # of behaviors	S-M & “points, [token reinforcement] praise, and encouragement”	ABAB
Jindal-Snape, 2004	2F Age 9 & 10 visual impairment	Integrated school in India, student triads “chat or free play” (p. 474)	- direction of gaze - conversation	total duration in seconds	self-evaluation w/ & w/o feedback on accuracy of self-evaluation	MB across behaviors w/ multiple intervention phases
King-Sears, 1999	1 F Age 7 Down Syndrome, mod-severe MR w/ hearing impairment	hallway travel - school entry to 1st class of day - hallway and cafeteria	- on-task behavior (socially appropriate) - trip time - adult prompts	% momentary time sampling observations - duration - frequency	BSM training incl: SPIN, visually cued S-M, self-evaluation* & self-reinforcement	ABC (2) although multiple baseline across participants intended
Koegel, Harrower, & Koegel, 1999	2 M Age 5 & 6 1 severe language & cognitive disability; 1 severe cognitive & LD	GE “full inclusion kindergarten classrooms, each at a different public elementary school”	- Appropriate performance on schoolwork - disruptive behavior (e.g., tantrums, leaving seat) “quality of classroom	% of observations using 15-second partial intervals	self-management package faded, with & without: - support person prompts & reinforcement - self-administer reinforcement - audio-cued	multiple baseline across participants using ABCD

			experience” (i.e., time spent in “time out”)		(chronograph) S-M	
Massey & Wheeler, 2000	1M Age 4 Autism	Integrated pre- school classroom including work & leisure settings; cafeteria	- Task engage- ment - Challenging behaviors	% of observations using 15-second momentary time sampling	Activity schedule (visually cued via photos, pictures/ symbols) training, w/ most-to-least (physical, gestural & verbal) teacher prompting	Multiple baseline across activities w/ ABCD
McDougall & Brady, 1998	3F, 2M Ages 9 to 10 1 LD, 1 ADD, & 3 w/o disabilities	GE math in two adjoining semi-open classrooms	- Math fluency: independent practice on +,- /x problems - on-task	- correct rate - incorrect rate % correct % observations (momentary time sampling)	BSM package incl: S-M, self- administration/ self- determination of reinforcement & self-graphing	Multiple baseline across participants w/ alternating treatments and fading phases
Mitchem, Young, West & Benyo, 2001 (also reported in Mitchem & Young, 2001)	All students (64M, 33F) in 3 classes, including 10 at-risk: 7 M, 3 F Ages 12 & 13 2 LD, 1 LD+BD, + 7 w/no identified disability	3 GE language arts classes in 7 th -grade w/31, 33, & 33 students, respectively	Whole class: - on-task At-risk students: - on-task - follow teacher instructions - get teacher attention appropriately - social cmptnc +antisocial beh	% of time % of time – whole interval % followed - frequency - School Social Behavior Scale teacher ratings	Classwide Peer- Assisted Self- Management System incl: audio- cued self- evaluation, peer ratings w/ matching, dyad and team points	multiple baseline across classes with multiple phases including fading
Monda-Amaya, Dieker, & Reed, 1998	3F, 2M Ages 13 to 14 LD	GE social studies; also training in SPED classroom	Goal attainment of essential classroom behaviors	Teacher-reported # goals established, # goals attained, & # goals made progress toward	training program to support transition from SPED to inclusive GE incl: goal setting, S-M & teacher matching	none – descriptive demonstration
O’Reilly, Tiernan, Lancioni, Lacey, Hillery, & Gardiner 2002	1 F Age 13 “moderate level of developmental disability”	3 classes inclu- ding GE Gaelic, Religion & English	on-task	% of 10-second partial intervals	audio-cued S-M w/ feedback/reinf for S-M accuracy & on- task behavior	multiple baseline across settings w/ one reversal
Possell, Kehle,	3 M	GE class & self-	1. Disruptive	15-sec partial	video self-modeling	multiple baseline

McLoughlin, & Bray, 1999	Age 5 to 8 SED	contained special education class	behavior 2. Teacher judge- ment and percep- tion of student behavior using: - token economy classroom/beh. management system - Conners' Tchr Rating Scale	in-terval time sample; - mean % of periods rated inappropriate vs. appropriate - T-scores		across participants w/ ABC
Rock, 2005 (Study 1)	3M Age 9, 11 & 13 1 Asperger 1 no disability (gifted) 1 Floating Harbor syndrome w/ speech & language impairments	GE Math in 4 th -5 th grade multiage classroom at independent practice	- Academic disengagement (time off task) - math productivity - math accuracy	- rate - total # completed math problems % correct on completed math problems	ACT-REACT: goal- setting; S-M of attention & S-M of productivity; self- talk & self- evaluation	Multiple baseline across participants w/ ABAB
Rock, 2005 (Study 2)	3M Age 10, 11 & 13 1 LD & ADHD 1 LD 1 DD w/ speech & language impairments	GE Math in 4 th -5 th grade multiage classroom at independent practice	- Academic engagement (time on task) - math productivity - math accuracy	- rate - total # completed math problems % correct on completed math problems	ACT-REACT: goal- setting; S-M of attention & S-M of productivity; self- talk & self- evaluation	Multiple baseline across participants w/ ABAB
Rock, 2005 (Study 3)	2F, 1M Age 7, 8 & 9 2 w/o disabilities 1 ADHD	GE Math and Reading in 2 nd -3 rd grade multiage classroom at independent practice	- Academic engagement (time on task) - math productivity - math accuracy	- rate - total # completed math problems % correct on completed math problems	ACT-REACT: goal- setting; S-M of attention & S-M of productivity; self- talk & self- evaluation	Multiple baseline across participants w/ ABAB
Snyder & Bambara, 1997	3 M Ages 14 LD	- SPED Learn- ing Support Room in Read- ing & Math - GE Social	Classroom survival skills: e.g., arrives on time; has pen, book, paper; home- work complete	% of skills demonstrated (observational checklist)	BSM package incl: S-M, problem identification, goal setting, self- evaluation & self-	Multiple baseline across participants w/ multiple phases

		Studies			reinforcement	
Thiemann & Goldstein, 2001	5 M Ages 6 to 12 4 autism, 1 language impairment	- library media room, each participant at table in triad w/ 2 GE peers - GE classroom (generalization probes)	Primary DVs: appropriate social-language communication: secure attention, initiate comments, initiate requests, contingent responses. Other DVs: Inappropriate social-language communication & topic maintenance	# occurrences during 10-minute sessions # occurrences during 10-minute sessions - mean # verbal utterances per episode	Direct social skills instruction using social stories, pictorial+written cues; interventionist visual/verbal prompts; videotape feedback with self-evaluation & token reinforcement	Multiple baseline across behaviors with ABC/D
Todd, Horner, & Sugai, 2002	1 M Age 9 LD & physical disability = Legg-Calve-Perthes disease of right hip [+8 non-targeted peers w/o disab for comparison]	blended 3 rd -4 th grade GE class: - Reading-writing period - Group project period	- problem behs - on-task behs - teacher praise - work completion - teacher perception of student's behavior for class period	% of 10-sec partial intervals % of 10-sec partial intervals - frequency - dichotomous: perm product + criterion-based 1-10 rating scale	BSM package incl: audio-cued S-M, self-evaluation, self-recruitment of teacher praise, self-recruitment of token reinforcers; based on FBA + behavior support plan	Multiple baseline across settings w/ AB ₁ AB ₂ B ₁₃
Uberti, Mastropieri & Scruggs, 2004	4M, 2F Age 8 to 9 4 LD (5 ESL) 1 student dropped	GE math	addition w/ regrouping	mean % correct	S-I	quasi-experimental, pre-post with one small group & non-equivalent comparison group
Wehmeyer, Yeager Bolding, Agran & Hughes, 2003	3M Ages 13 to 14 2 MR w/ speech impairment 1 autism w/ speech & language impairment	GE history GE Art GE Science	- inappropriate touching - inappropriate verbalization - on-task - disruptive - listening/att'n - listening	- frequency - frequency % of 10-second partial intervals “ “ “ “ “ “ “ “ “	Multi-component self-regulation incorporating goal setting, antecedent cue regulation via picture prompts, visually cued S-M, S-E, S-R	Multiple baseline across participants and behaviors w/ ABC

Note: ADD = attention-deficit disorder, ave. = average, behs. = behaviors, disab. = disabilities, eval. = evaluation, F = female, GE = general education, hmwk. = homework, lang. = language, LD = learning disability, M = male, MR = mental retardation, reinf. = reinforcement, S-E = self-evaluation, S-I = self-instruction,

S-M = self-monitoring, S-R = self-reinforcement, SPED = special education, SSRS = Social Skill Rating System, stds. = studies; Tchr. = teacher, w/ = with, w/o = without.

Table 2

Efficacy, Integrity and Various Outcome Measures for Category III Behavioral Self-Management Studies

Authors, Year	Intervention efficacy	Intervention integrity	Dependent variable (DV) reliability	Maintenance probes/follow-up	Generalization	Social validity of DV changes
Agran, Blanchard, Wehmeyer & Hughes, 2002	strong FC	IT: not measured ⁺ AD: not measured ⁺	high; no Kappa ⁻	post-training phase after training phase	not conducted; ⁺ BSM used directly in GE w/ MB across participants	informal/anecdotal - teachers; subjective evaluation - students
Agran, Blanchard, Wehmeyer & Hughes, 2001	mixed FC; some support for S-M but not S-R ⁺ ; design limitations ⁺	IT: not measured ⁺ AD: not measured ⁺	high; no Kappa ⁻	post-training phase after training phase	not conducted; ⁺ BSM used directly in GE w/MB across groups	subjective evaluation
Alberto, Taber & Fredrick, 1999	moderate FC	IT: students met 100% criterion AD: not measured ⁻	high; no Kappa ⁻	used fading phase	not conducted; ⁻ BSM used directly in GE; across settings design	not measured ⁻
Apple, Billingsley & Schwartz, 2005 (Study 2)	strong FC for initiations when BSM teaching used	IT: 89% overall for students AD: 94% overall for students	high; no Kappa ⁻	post-training phase faded prompts	measured compliance-giving responses across settings	subjective evaluation via ratings by teachers & parents
Brooks, Todd, Tofflemeyer & Horner, 2003	Mixed FC; some strong but target behavior worse in one setting ⁺	IT: students met 90% criterion AD: not measured ⁻	high; no Kappa ⁻	not conducted ⁻	BSM used initially in GE, then SPED; across settings design; multiple DVs	not measured ⁻
Bryan & Sullivan-Burstein, 1998 (Study 3)	mixed; statistically significant effect for S-G on spelling but not math homework; effect sizes unreported ⁻	IT: not measured ⁻ AD: not measured ⁻	not measured ⁻	not conducted ⁻	not conducted; ⁻ BSM used directly in GE; multiple DVs	discussed but no systematic data reported
Buggey, 2005 (Study 1)	FC evaluation limited = used only two baselines in multiple baseline design ⁺	IT: not measured ⁻ AD: not measured ⁻	high; no Kappa ⁻	post-training phase after training phase	not conducted; BSM used directly in multiple GE settings w/ MB across students	not measured explicitly ⁻ but anecdotal data from teachers
Buggey, 2005 (Study 2)	FC evaluation limited = used only two baselines in multiple baseline design ⁺	IT: not measured ⁻ AD: not measured ⁻	high; no Kappa ⁻	strong via probes 2 weeks after end of post-training phase but limited data ⁺	not conducted; BSM used directly in GE w/MB across students	not measured explicitly ⁻ but anecdotal data from teachers
Buggey, 2005	FC evaluation limited	IT: not measured ⁻	high;	post-training phase	not conducted;	not measured

(Study 3)	ted = used only two baselines in multiple baseline design ⁺	AD: not measured ⁻	no Kappa ⁻	after training phase	BSM used directly in GE w/MB across target behaviors	explicitly ⁻ but anecdotal data from teachers
Copeland, Hughes, Agran, Wehmeyer & Fowler, 2002	strong FC	IT: trainer performed 99% of steps AD: students' % of S-M & goal evaluation steps	high; no Kappa ⁻	not conducted ⁻	not conducted; BSM used directly in GE; multiple outcome measures	subjective evaluation
Craft, Alber & Heward, 1998	mixed FC	IT: not measured ⁻ AD: not measured ⁻	high; no Kappa ⁻	faded intervention elements during post-training phases	BSM trained first in SPED then used in GE; multiple DVs	GE teacher, students' subjective evaluation (interviews); no social comparison ⁺
Crum, 2004	weak FC ⁻	IT: not measured ⁻ AD: not measured ⁻	not measured ⁻ no Kappa ⁻	not measured ⁺	not measured ⁺	not identified ⁻ but compared data of 1 "neuro-typical" peer
Dalton, Martella & Marchand-Martella 1999	strong FC	IT: students met 100% criterion using S-M form AD: not measured ⁺	high; no Kappa ⁻	removed intervention components in phase after S-M training phase	pretrained BSM in SPED then used in GE	subjective evaluation via teachers' daily Likert-scale ratings
Davies & Witte, 2003	strong FC threats posed by non-equivalent conditions in respective phases of ABAB design ⁺	IT: students met 100% criterion on 20-item quiz AD: not measured ⁻	moderate; event recording = no assurance of one-to-one event correspondence ⁻	not conducted ⁻	not conducted ^{+/-} BSM used directly in GE	not stated explicitly but quasi-social comparison possible using data from "matched controls" (p. 139)
DuPaul, McGoey & Yugar, 1997	directional improvements but weak FC; no statistical analysis for pre-post measures ⁺	IT: not measured ⁻ AD: integrity checklist used once per week with 100% results	high for primary DV w/ Kappa; generally "adequate" (p. 638) for other DV measures	not conducted as school year ended ⁺	trained in SPED then modified use for GE; plus 3 measures "to examine possible collateral effects" (p. 637)	not stated explicitly; teacher questionnaire items incl. subjective evaluation items (p. 639) but those results not reported ⁻
Gansele & McMahon, 1997	mixed; few statistically significant results, mostly for main effects (time, group) but not for interaction; no effect sizes reported ⁻	IT: not measured ⁻ AD: teacher self-reports, corresponding permanent products collection & 2 reliability checks on teachers by consultants	not reported ⁻	not addressed ⁻	BSM used directly in GE; multiple DVs	not addressed ⁻

Gerditz, 2000	uncontrolled case study design with no baseline; cannot demonstrate FC ⁺	IT: not measured ⁻ AD: not measured ⁻	4% disagreement on data sheets but limited description ⁻ ; not measured for direct observations ⁺ ; no Kappa ⁻	not addressed ⁻	not addressed ⁻ (design limitations)	not stated & not addressed explicitly ⁻ ; anecdotal information
Gilberts, Agran, Hughes & Wheymeyer 2001	strong FC	IT: Mean 97-100% for 7 peer-delivered training steps AD: 90+% for students' S-M accuracy	high; no Kappa ⁻	after training phase, post-training phase continued use of S-M form & required 2 retraining sessions for 3 of 5 students	not addressed ⁻ but 11 classroom survival skills comprise DV; BSM used directly in GE	subjective evaluation via teacher & participant Likert-scale ratings; no social comparison ⁺
Gregory, Kehle & McLoughlin, 1997	no graphed data = cannot evaluate FC ⁻ but phase means suggest improvement	IT: not measured ⁻ AD: not measured ⁻	"were calculated using Kappa" (p.684) but data unclear/missing ⁻	reduced intervention intensity in later phases	trained & used BSM in SPED, eventually used BSM in GE	not addressed explicitly ⁻
Gumpel & David, 2000	moderate-strong FC	IT: students met 100% criterion AD: not measured ⁻	high, included % for occurrence & nonoccurrence; no Kappa ⁻	strong with probes from 2 to 10 weeks post-intervention	trained BSM in SPED then applied in GE; multiple DVs	social comparison via randomly selected peers; data lacking ⁻ from interviews for subjective evaluation
Hoff & DuPaul, 1998	strong FC only for initial token reinf. moderate FC for phases with S-M; ⁺ reported PND	IT: not measured for students ⁻ AD: 98% for teachers via 11-item scale	high; also reported Kappa	reduced intervention intensity in last phase	BSM used directly in GE; across settings design; multiple DVs	social comparison via observations of teacher-identified "average" peers
Hughes, Copeland, Agran, Wehmeyer, Rodi & Pressley, 2002	strong FC	IT: not measured ⁻ AD: high % for students' S-M use	high; no Kappa ⁻	one element of training phase (prompt card/book) continued during post-training phase	most students trained in SPED w/ BSM applied in GE; some students trained directly in GE; various DVs	subjective evaluation via questionnaires of peers, SE & GE teachers; also "asked only one participant" out of four ⁺ (p. 269)
Hughes, Fowler, Copeland, Agran, Wehmeyer & Church-Pupke, 2004 (Study 1: 1 st period)	moderate-strong FC	IT: 100% steps correct for trainer AD: high %s for self-prompting & accuracy of self-assessment & self-	high; no Kappa ⁻	post-training phase after training phase	BSM used directly in GE; measured multiple outcomes	subjective evaluation via peers 5-point Likert scale & post-intervention interview w/ participants

		evaluation				
Hughes, Fowler, Copeland, Agran, Wehmeyer & Church-Pupke, 2004 (Study 2: 2 nd period)	same as Study 1 = see preceding cell	same as Study 1 = see preceding cell	same as Study 1 = see preceding cell	same as Study 1 = see preceding cell	same as Study 1 = see preceding cell	same as Study 1 = see preceding cell
Hughes, Rung, Wehmeyer, Agran, Copeland & Hwang 2000	mostly strong FC	IT: peers averaged 97% correct on 5-step training of students AD: students self-prompted at high %	high; no Kappa ⁺	strong maintenance via probes 2, 4, 6 & 8 weeks after post-training phase; post-training phase after training phase	BSM used directly in GE; multiple DVs; assessed generalized performance to unfamiliar peers	Social comparison via range of expected performance of GE peer from another school; participants' subjective evaluation data
Hutchinson, Murdock, Williamson & Cronin, 2000	FC weak; directional improvements but timing of phase changes problematic ⁺	IT: student trained to 100% criterion AD: 95% agreement on S-M between student & observer	appears moderate but description of results limited; ⁺ no Kappa ⁺	not conducted ⁺	not conducted; ⁺ BSM used & applied initially in GE; multiple DVs	not addressed ⁺
Jindal-Snape, 2004	moderate FC for initial self-evaluation but insufficient # sessions for stagger in MB design ⁺	IT: not measured ⁺ AD: not measured ⁺	cannot evaluate; IO agreement formula (A/A+D) inconsistent ⁺ with measure (duration) reported for DV	strong maintenance via probes 6 months after intervention ended	mixed results for "nontarget behaviors"	not measured ⁺
King-Sears, 1999	accommodating teachers preferences compromised FC; ⁺ directional improvements; large effect sizes for tchr ratings	IT: 100% for teachers' use of 10-step script AD: not measured ⁺ for students	high; no Kappa ⁺	post-training phase after training phase; limited anecdotal data (p. 155); end of school year factor	suggestive data for generalization to untrained setting; multiple settings and DVs	Not addressed explicitly ⁺
Koegel, Harrower, & Koegel, 1999	strong FC w/ only 2 students in MB design	IT: not measured ⁺ AD: not measured ⁺	high; no Kappa ⁺	intervention components removed immediately after fading phase	not conducted; ⁺ applied BSM directly in GE; multiple DVs	social comparison via observing 7 randomly selected peers
Massey & Wheeler, 2000	moderate/mixed FC	IT: not measured ⁺ AD: not measured ⁺ but primary DV incorporated integrity-like elements	moderate; no Kappa ⁺	post-training phase w/ fewer prompts after training phase	BSM used directly in GE; across activities design; multiple DVs	subjective evaluation via adults' ratings of scale items
McDougall & Brady, 1998	moderate FC	IT: not measured ⁺ AD: students' S-M	high; no Kappa ⁺	strong maintenance via probes 1 & 2	used probes to assess	social comparison & informal-anecdotal

		accuracy 95+% w/ one exception; S-M punctuality 100%		weeks after fading phase ended	generalization (weak ⁺) to untrained behavior; multiple DVs; BSM used directly in GE	
Mitchem, Young, West & Benyo, 2001 (also reported in Mitchem & Young, 2001)	moderate-strong FC	mean 97% via 30- item checklist; unclear whether 97% applied to IT and/or AD	moderate-high; no Kappa ⁻	last phase w/ most intervention compo- nents removed followed fading phases	not conducted; BSM used directly in GE; multiple DVs	social validity questionnaires w/ teachers & students incl. subjective evaluation but results unclear
Monda-Amaya, Dieker, & Reed, 1998	no systematic research design & data limitations ^{-/+} = cannot assess	IT: not measured ⁻ AD: not measured ⁻	not addressed ⁻ no Kappa ⁻	not addressed ⁻	not conducted ⁻ trained in SPED, applied in GE	not mentioned explicitly ⁻ but subjective evalua- tion data in follow- up interviews
O'Reilly, Tiernan, Lancioni, Lacey, Hillery, & Gardiner 2002	strong FC	IT: students trained to 100% criterion AD: not measured ⁻	high; no Kappa ⁻	not conducted ^{-/+}	not conducted; BSM trained initially in SPED then used in GE; across settings design	social comparison via observations of "two most well- behaved" peers (p. 97); subjective evaluation via teacher interviews
Possell, Kehle, McLoughlin, & Bray, 1999	moderate-mixed FC	IT: not measured ⁻ AD: not measured ⁻ "essentially 100%" = lacks precise data & researcher self- checked (not inde- pendent measure) ⁻	moderate; no Kappa ⁻	primary DV means unreported for intervention phase & "bifurcated" follow-up data preclude clear evaluation ⁻	not conducted; ⁻ training done in office with DV measured in class	not addressed ⁻
Rock, 2005 (Study 1)	moderate-strong FC	IT: not measured ⁻ AD: not measured ⁻	moderate	not measured ⁻ but author identified lack of fading phase	moderate-strong generalization for problem behavior	not measured ⁻
Rock, 2005 (Study 2)	moderate-strong FC	IT: not measured ⁻ AD: not measured ⁻	high; no Kappa ⁻	not measured ⁻ but author identified lack of fading phase	moderate-strong generalization for problem behavior	not measured ⁻
Rock, 2005 (Study 3)	moderate-strong FC	IT: not measured ⁻ AD: not measured ⁻	moderate-high; no Kappa ⁻	not measured ⁻ but author identified lack of fading phase	moderate-strong generalization for problem behavior	not measured ⁻
Snyder & Bambara, 1997	moderate-strong FC	IT: not measured ⁻ AD: not measured ⁻	high; no Kappa ⁻	after fading phase, used phase w/	trained in SPED then weak-moderate	social comparison and subjective

				nearly all intervention components removed	initial impact in GE but strong later	evaluation
Thiemann & Goldstein, 2001	mostly moderate FC with some weak FC	mean treatment fidelity was 89%; unclear whether 89% applied to IT and/or AD	moderate-high; no Kappa ⁻ strong video tape procedures	post-training phase after training phase	weak generalization to modified classroom activities; multiple DVs	subjective evaluation via teacher ratings using Likert-scale
Todd, Horner, & Sugai, 2002	strong FC	IT: not measured ⁻ AD: not measured ⁻	high; no Kappa ⁻	used phase that reduced intensity of cues	not conducted; ^{-/+} used BSM directly in GE; across settings design; multiple DVs	no explicit mention but measured teacher perception of change
Uberti, Mastropieri & Scruggs, 2004	pre to post test improvement statistically significant but omitted multiple measures ⁻ between pre-post; no effect sizes reported ⁻	IT: not measured ⁻ AD: not measured ⁻	not measured ⁻	not measured ⁻	not conducted; ⁻ BSM used directly in GE;	not named ⁻ but compared data of peers (social comparison); & teacher & participant anecdotal information
Wehmeyer, Yeager Bolding, Agran & Hughes, 2003	strong FC	IT: not measured ⁻ AD: not measured ⁺	not measured ⁺ no Kappa ⁻	post-training phase after training phase	not conducted; ⁻ BSM used directly in GE; multiple DVs	subjective evaluation via teachers' goal attainment scale (GAS) ratings

Note: AD = adherence to ongoing intervention procedures by student-participants or teachers-adults, BSM = behavioral self-management, FC = functional control, GE = general education, IT = initial training of students, MB = multiple baseline, PND = percentage of nonoverlapping data; SPED = special education; "not conducted" in generalization column indicates the absence of formal generalization probes.

Table 3

Fulfilling the Promise of Behavioral Self-Management in Inclusive General Education Settings – Then and Now

Category III BSM Studies	Then (1970 - 1996)	Now (1997 - mid-2005)
Dissemination	• ½ study published per year • limited to 8 journals: 5 special education, 3 behavioral, 0 related services • no journals with mainly general education readership	• 5 studies published per year • expanded to 26 journals: 17 special education, 5 behavioral, 4 related services (3 psychology & 1 social work) • no journals w/ mainly general education readership
Participants' Disabilities, Age Ranges, & Settings	• LD, E/BD, AD/HD • 6 to 18 years old • almost always academic classes; plus study hall and hallway locker • no out-of-school settings	• LD, E/BD, AD/HD; plus MR, autism, SLI, Asperger, HI, DD, VI, OHI, OI, physical dis., multiple dis., MEH, ODD, PDD • 4 to 19 years old • wider range of academic classes; plus playground, art cafeteria, hallways, gym, library • out-of-school settings: fast food restaurant, neighborhood street, and public library
Dependent Variables or Target Behaviors	• commonly variations of time-on-task behaviors • sometimes academic performance • rarely homework or SIB • rarely social interaction • no aggressive behavior	• commonly variations of time-on-task behaviors • infrequently academic performance • rarely homework, no SIB • numerous social interaction and classroom survival skills • one study of aggressive behavior
Types of BSM Interventions	• self-monitoring predominates but no tactically-cued self-monitoring interventions • video self-modeling, self-graphing, self-instruction, self-evaluation & self-reinforcement rarely investigated	• self-monitoring predominates but no tactically-cued self-monitoring interventions • video self-modeling, self-graphing rarely investigated • self-evaluation & self-reinforcement quite common • emergence of self-instruction variations, self-recruitment of reinforcement, and use of FBA/PBS or goal setting in conjunction with BSM
Efficacy of Interventions	• mostly moderate to strong with a few weak outcomes	• moderate-strong & strong for slightly < 50% of studies; moderate-mixed and weak-indeterminate for slightly > 50% of studies

Note. AD/HD = attention deficit-hyperactivity disorder, BSM = behavioral self-management, DD = developmental disabilities, dis. = disabilities, E/BD = emotional/behavioral disorders, FBA = functional behavioral assessment, HI = hearing impairments, LD = learning disabilities, MEH = mild educational handicap, MR = mental retardation, ODD = oppositional defiant disorder, OHI = other health impairments, OI = orthopedic impairments, PBS = positive behavioral supports, PDD = pervasive developmental delay, SED = serious emotional disturbance or disorder; SIB = self-injurious behavior, SLI = speech and language impairments, VI = visual impairments

*Does Inclusion Help Students:
Perspectives from Regular Education and Students with Disabilities*

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This research focused on verifying the impacts of Inclusion on both students with disabilities (SWDs) and their Regular Ed classmates. High school students (n=364) within inclusive classes completed surveys reflecting their perceptions of the effectiveness of the learning environment and the attitudinal impacts of Inclusion. Results documented significant positive attitudinal and self-reported learning impacts of Inclusion for both SWDs and Regular Ed peers. SWDs reported higher self-concept, liking of school and teachers, and greater motivation to work and learn. Unexpectedly, Regular Ed student responses followed the same patterns, reflecting significantly higher attitudes across the board and perceived academic achievement, as well as higher tolerance for SWDs. The importance of anonymity for SWDs is discussed in light of significantly higher attitudinal ratings among Regular Ed students most aware of the presence of SWDs. Implications for the future of Inclusion are discussed.

Introduction

The value and impact of education has been clearly defined as a balance not only of achievement and learning, but also of the attitudinal, social and personality-based effects on students (Bernhardt, 1998; Daniels, 2002; Dewey, 1916; Lewis & Shaha, 2003). The importance of the two-fold measurement of success is nowhere more important than for the subset of students whose learning and physical needs make school either challenging or overwhelming. In the age of accountability, the goals of Inclusion must echo those of education as a whole: to help Students with Disabilities gain the maximum in attitudinal impacts and social benefits from their school experiences (Baker & Zigmond, 1995; Fuchs & Fuchs, 1988; Salisbury, Gallucci, Palombaro & Peck, 1995; Soodak, Podell & Lehman, 1998).

Much research has focused on establishing the validity of the argument that Inclusion is beneficial to Students with Disabilities. Studies have shown that Students with Disabilities benefit socially with fewer negative labels, reduced stigma, and increased interaction with Regular Ed peers (Brady & Taylor, 1989; Huefner, 1988; Snyder, 1999; Wang & Birch, 1984). Some evidence suggests that achievement and learning for Students with Disabilities may also be benefited by Inclusion (Barclay, Holmes, Elmore, Dupuis, Lewis, & Shaha, 2006; Soodak, Podell & Lehman, 1998).

For many educators, however, the practice of Inclusion remains clouded in controversy (Davis, 1989; Fuchs, Fuchs & Fernstrom, 1993; Klingner, Vaughn, Schumm, Cohen & Forgan, 1998). While much can be found regarding the apparently favorable impact of Inclusion on Students with Disabilities, little research addresses the potentially negative impact on the Regular Ed Students. It may be considered “politically incorrect” to question such an important and sensitive topic that emphasizes the needs of the disabled, hence the paucity of data asking the risky questions.

Do we think so little of Inclusion that we don’t dare ask the full set of questions regarding its impact on the entire range of students? Do we favor the few so sensitively that we are unwilling to be concerned about the Regular Ed Students whose classrooms are being adapted to meet the needs of others? Are we truly committed to the educational experience of all students, and if so are we as educators willing to ask the frightening questions regarding the impact of Inclusion on

all students? If as much as \$60 billion a year is spent on the 12 percent of Students with Disabilities, do we not have an obligation to document whether that lop-sided expenditure represents any benefit to Regular Ed Students (Kavale, 2002)? On the other hand, do Students with Disabilities experience favorable attitudes toward learning and their personal capabilities within inclusive settings, or are the benefits only social?

The purpose of this research was to quantify the attitudinal impacts of Inclusion on both Students with Disabilities and their Regular Ed classmates. Our objective was to verify claims by other researchers that Students with Disabilities prefer and feel benefited by Inclusive classroom settings. In addition, our design was to answer the more dangerous, more sensitive and too-seldom-asked questions regarding the impact of Inclusion on the Regular Ed Students into whose classroom the Students with Disabilities have been included.

Method

The Student Survey was created collaboratively in two versions for assessing the attitudinal impacts of Inclusion on students and their perceptions of Inclusion. Representatives engaged in the creative process included three key high school leaders, three district Inclusion resource personnel, a local university expert in exceptional student education, and two professional survey design experts as consultants (Shaha, Lewis, O'Donnell & Brown, 2004). The language, structure and execution methodology for the Survey were designed to ensure privacy and anonymity for the students, and adherence to politically correct language.

The Student Survey was developed in two versions, one for each student type (see Appendices A and B). Both versions included 17 "identical" items: 15 were Likert-scaled items (ratings from 0 to 5), and two were open-ended items. The items used virtually identical wording for each of the two survey versions, the only difference being the substitution of student type labels for each of the complimentary versions. In addition to the identical items, the Student Survey version for Students with Disabilities included three non-identical items (20 items total) regarding their personal experience within Regular Ed classrooms. The version for Regular Ed students included two additional non-identical items (19 items total) regarding their perceptions of Students with Disabilities sharing classroom experiences. All items required response except for the two open-ended items.

All students voluntarily completed the web-based Student Survey in the computer lab during the same one-week time period in the spring term of 2005. The resulting response rate was 100%, and no student chose not to complete the survey. To protect crucial student privacy and anonymity during participation in the Student Survey, a teacher initiated the survey process for each student by first answering the question, "Does this student have an IEP?" If the answer was "yes" (i.e. this is a Student with Disabilities), the respondent was presented the survey for Students with Disabilities (see Appendix A). Conversely, if the answer was "no" to the IEP question, the respondent was presented the survey for Regular Ed students (see Appendix B). Directions for students clarified that there were multiple versions of the survey so as to not draw attention to visible differences in Survey items for Students with Disabilities versus Regular Ed classmates.

Respondents to the Student Survey included 364 high school students (grades 9-12) enrolled in intact, inclusive classrooms within a single high school in rural Florida, including 98 Students with Disabilities and 266 Regular Ed students. The study was limited to a single High School setting in order to increase interpretive and inferential capabilities by reducing as much as possible any explanations of findings attributable to differences between school settings, leadership, or other variables. Inclusive classrooms were defined as those in which Students with Disabilities were intentionally placed among Regular Ed Students as part of the District and High School Inclusion program (c.f. Fink, 2004). The classes engaged in the study were limited to mathematics, English and reading. Inclusive classrooms reflected a structure involving two teachers each for the entire classroom period, including one Regular Ed teacher, and one additional SWD expert resource in a co-teaching model. Students with Disabilities included those students classified as SWDs based on Florida State Department of Education guidelines (State Guidelines, 2006). All other respondents were classified as Regular Ed students.

All analyses were conducted using SPSS (ver 11.0 or higher). Responses for Likert-scaled items (0-5) were categorized as favorable when group means were equal to or greater than 2.5, wherein 0-2 represented unfavorable responses and 3-5 represented favorable. Cumulative Attitudinal Rating scores were created by summing the 15 Likert-scale items uniform between survey versions (i.e. versions for Included and Regular Education students) – the maximum Cumulative Rating was, therefore, 75.

Results

Attitudinal Impacts on Students

Responses to the web-administered Student Survey were analyzed, including responses from 364 students participating in inclusive classrooms. Students with Disabilities represented 26.9 percent (n=98) of the respondents, and Regular Ed student represented 73.1 percent (n=266).

Included Students

Data clearly established that students with disabilities included in regular education classrooms were uniformly and systematically positive (ratings of 3 or greater) in their motivation and fulfillment, and reported being focused and successful, academically and socially (see Table 1). Per-item data indicated highly favorable attitudinal impacts of inclusion on Included Students with Disabilities for every item. Cumulative Attitudinal Ratings (see Figure 1) were very favorably skewed with a mean of 60.2 of the maximum 75.

One item on the Student Survey was unique for Included Students with Disabilities: “I work harder to learn when I am included with my regular education peers.” Data showed that Included Students with Disabilities reported highly favorable tendencies to “work harder to learn” in the inclusive classroom settings (see Figure 2).

Regular Education Students in Inclusive Classrooms

Analyses of data from the Regular Education Students revealed mix favorable and unfavorable results (see Table 2). The mean Cumulative Attitudinal Rating was 30.38 of the maximum 75, a value that was near but *below* the mid-point of 35. Per-item analyses showed favorable mean

ratings (means > 2.5) for six of the 15 items, while unfavorable results were found for the other nine items.

Superficial interpretation of the unfavorable response patterns was found to be *misleading* as a result of further analyses conducted. Investigation into the data revealed a fascinating phenomenon that uncovered a highly favorable underlying pattern among the Regular Ed Students that is best explained through a two-step analytic process:

Step 1. "Anonymity." The first step involved examination of responses by Regular Ed Students to the item unique to their version of the survey that read, "There are students with disabilities in my classes." Data indicated that 47.0 percent of the Regular Ed Student respondents – remembering that they are all in inclusive classrooms – reported being completely unaware of the presence of the Included peers with disabilities (see Table 3 and Figure 3). A total of 76.7 percent of the Regular Ed Students reported *little or no* awareness (ratings of 2 or lower) of the presence of Students the Disabilities in their Inclusive classes. Fully 47.0 percent of the Regular Ed Students reported *no* awareness of the Included peers. Based on this pattern, correlational analyses were undertaken to discern whether attitudinal responses differed for Regular Ed Students aware versus unaware of their peers with disabilities.

Step 2. Correlation of Attitudes with Level of Awareness. Data were therefore further scrutinized to understand response patterns correlated with levels of awareness. Regular Ed Students were grouped into two subgroups as either Aware (ratings from 3-5) or Unaware (ratings from 0-2) that students with disabilities were included in their classrooms based on the corresponding survey item. It remains important to remember that 100 percent of responding Regular Ed Students were in Inclusive classrooms.

Results revealed statistically significant correlations between attitudinal ratings and levels of awareness of the presence of Included Students with Disabilities. However, the pattern was somewhat *counterintuitive*: The greater the awareness of Included students, the higher the attitudinal ratings were for the Regular Ed Students.

ANOVAs were conducted to quantify contrasts between Unaware and Aware groups (see Table 4). Statistically significant differences were verified for Cumulative Attitudinal Ratings (see Figure 3) and for *every item*, with corresponding p-values of .002 or less (except one item marginally significant at $p=.058$). All differences favored the significantly higher attitudinal ratings among the students Aware of Students with Disabilities (SWD) (ratings of 3-5 on each respective item). The resulting levels of significance (p-values) are also included in Table 4.

Correlation coefficients were also computed for each item between level of awareness (0-5) and the ratings on each item, leveraging Spearman's Rho as the statistic of choice (Kendall's Tau for confirmatory purposes). Statistically significant correlations were verified for *every item*, and every item had a corresponding p-value of less than .001 (see right-most column of Table 4). The interpretation of the correlation is that "the higher the level of awareness among Regular Ed Students of the presence of Included Students with Disabilities, then the higher their attitudinal ratings" for each item.

Conclusion and Discussion

Results clearly document the positive attitudinal impacts of Inclusion for both Students with Disabilities and their Regular Education peers. Students with Disabilities uniformly reported being highly motivated and fulfilled, and reported being focused and successful both academically and socially. Students with Disabilities reported better social and learning environments in inclusive settings furthering their motivation to learn and to work harder. Included Students with Disabilities reported that their learning proficiency increased with the Regular Ed Students along side them.

While the favorable attitudes among Students with Disabilities could have been expected, the favorable results for Attitudes of Regular Ed Students were encouraging. What was most validating was the discovery that highest attitudes were correlated with higher awareness of the inclusion of peers with disabilities. This is a fascinating finding that suggests that Regular Ed Students are happier and more positive about the classroom, their peers, their personal learning and themselves when they are aware of the inclusiveness of the setting (c.f. Huefner, 1988; Wang & Birch, 1984). This finding suggests that the more they know and understand about their environment the less they may be encumbered by any potential inconveniences that inclusive classroom settings might bring.

Another finding in this study is that Regular Ed students were on the whole unaware of the included students and unable to identify students with disabilities in their inclusive classes. For many included students, this apparent blindness to their disabilities is precisely the anonymity they *desire and prefer*, as they want their disabilities to be invisible so they can be “just like their peers without disabilities.” In high school they just want to learn and participate in school classes and activities and not be singled out because of their disabilities.

The desire for anonymity among the Students with Disabilities seems to be in conflict with the apparently favorable effects of informed Regular Ed Students. It would potentially be dangerous to the beneficial impacts of Inclusion to purport that Regular Ed Students should be fully informed of the disabilities of their *invisible* classmates that appear normal (c.f. Davis, 1989; Snyder, 1999). The main question remaining is how do we balance the need for anonymity for students with disabilities with the need for awareness for their peers without disabilities. More research is needed to discern a clearer understanding of the needs of all students in inclusive classroom settings. In the absence of such research, however, these data clearly show that Inclusion is mutually beneficial to the attitudes of both Students with Disabilities and their Regular Ed peers, and that Inclusive practices should not be held back pending more data.

The data in this research were limited to the attitudes of high school students in order to maximize the precision and interpretability of the findings. While further research is needed involving other age groups, in our opinions there is no reason to believe that the positive attitudes expressed toward Inclusion by either student type would be different in any negative sense. We particularly anticipate that to be the case for the interesting balance uncovered between the desire for anonymity on the part of the Students with Disabilities, and the benefits of awareness on the part of the Regular Ed classmates.

The goals of education remain increased learning and best social impacts. Inclusion has been proven once again to be a valid and favorable approach for meeting those goals for both Students with Disabilities, and also their Regular Ed peers. Taken in concert with recently established correlation between the attitudinal impacts and *achievement* gains for both Included and Regular Ed students (c.f. Barclay, Holmes, Elmore, Dupuis, Lewis & Shaha, 2006; Elmore, Collins, Lewis & Shaha, 2006), and the overwhelmingly positive attitudinal impacts on both Special and Regular Ed teachers (Barclay, et.al, 2006), little question or controversy remains as to the favorable attitudinal power inclusion provides for students.

Table 1. Mean Ratings from Included Students for 15 Student Survey Items Common to Both Survey Versions.

	Mean	Std. Deviation	N
Cumulative Attitudinal Ratings	60.2	13.3	97
I like Ss w/ disabilities & Reg Ed in my classes	4.4	1.2	97
My classes are better w/ disabilities & Reg Ed	3.9	1.4	97
I learn better w/ disabilities & Reg Ed in class	3.9	1.2	97
I learn better w/ multiple teachers in class	3.9	1.4	97
I work harder to learn w/ Reg Ed Ss in class	4.0	1.3	97
I learn better ... teachers teach in different ways	3.9	1.3	97
All learn better ... all treated fairly	3.8	1.5	97
No one is really disabled .. just learn differently	4.1	1.4	97
All are equal members of the class	4.1	1.4	97
Care about and value my peers	4.0	1.4	97
I have friends ... Reg Ed vs w/ disabilities	4.5	1.1	97
My peers care about me and value me	3.6	1.4	97
I spend time outside of class with my ... peers	3.7	1.6	97
Because of experience, I am more comfortable around ...	4.1	1.3	97
Because of experience, more respectful ...	4.0	1.4	97
I feel better about myself since shared classes	4.2	1.2	97

Table 2. Mean Ratings from Regular Education Students for 15 Student Survey Items Common to Both Survey Versions.

	Mean	Std. Deviation	N
Cumulative Attitudinal Ratings	30.4	18.1	266
I like Ss w/ disabilities & Reg Ed in my classes	1.4	1.5	266
My classes are better w/ disabilities & Reg Ed	1.0	1.4	266
I learn better w/ disabilities & Reg Ed in class	0.9	1.3	266
I learn better w/ multiple teachers in class	1.4	1.6	266
I learn better ... teachers teach in different ways	1.5	1.7	266
All learn better ... all treated fairly	2.1	1.9	266
No one is really disabled .. just learn differently	2.8	2.1	266
All are equal members of the class	3.1	2.0	266
Care about and value my peers	3.2	1.8	266
I have friends ... Reg Ed vs w/ disabilities	2.5	2.0	266
My peers care about me and value me	2.0	1.8	266
I spend time outside of class with my ... peers	1.4	1.7	266
Because of experience, I am more comfortable around ...	2.1	1.8	266
Because of experience, more accepting and patient ...	2.5	1.9	266
Because of experience, more respectful ...	3.1	1.9	266
I feel better about myself since shared classes	1.9	1.8	266

Table 3. Ratings from Regular Ed Students for “There are students with disabilities in my classes”

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	125	47.0	47.0	47.0
1	53	19.9	19.9	66.9
2	26	9.8	9.8	76.7
3	27	10.2	10.2	86.8
4	14	5.3	5.3	92.1
5	21	7.9	7.9	100.0
Total	266	100.0	100.0	

Table 4. Statistical Summary for Regular Ed Students Unaware versus Aware of Included Students

		N	Mean	Std. Deviation	ANOVA (p-values)	Correlation with Awareness (p-value)
Cumulative Attitudinal Ratings						
	Unaware (0-2)	204	26.45	16.995	0.000	0.000
	Aware of SWDs (3-5)	62	43.29	15.753		
I like Ss w/ disabilities & Reg Ed in my classes	Unaware (0-2)	204	1.11	1.336	0.000	0.000
	Aware of SWDs (3-5)	62	2.34	1.609		
My classes are better w/ disabilities & Reg Ed	Unaware (0-2)	204	0.7	1.094	0.000	0.000
	Aware of SWDs (3-5)	62	1.95	1.644		
I learn better w/ disabilities & Reg Ed in class	Unaware (0-2)	204	0.61	1.038	0.000	0.000
	Aware of SWDs (3-5)	62	1.82	1.694		
I learn better w/ multiple teachers in class	Unaware (0-2)	204	1.05	1.349	0.000	0.000
	Aware of SWDs (3-5)	62	2.39	1.885		
I learn better ... teachers teach in different ways	Unaware (0-2)	204	1.21	1.521	0.000	0.000
	Aware of SWDs (3-5)	62	2.65	1.865		
All learn better ... all treated fairly	Unaware (0-2)	204	1.79	1.83	0.000	0.000
	Aware of SWDs (3-5)	62	3.03	1.81		
No one is really disabled .. just learn differently	Unaware (0-2)	204	2.47	2.066	0.000	0.000
	Aware of SWDs (3-5)	62	3.98	1.594		
All are equal members of the class	Unaware (0-2)	204	2.85	2.073	0.000	0.000
	Aware of SWDs (3-5)	62	3.9	1.686		
Care about and value my peers	Unaware (0-2)	204	3.12	1.843	0.058	0.003
	Aware of SWDs (3-5)	62	3.61	1.623		
I have friends ... Reg Ed vs w/ disabilities	Unaware (0-2)	204	2.21	2.016	0.000	0.000
	Aware of SWDs (3-5)	62	3.29	1.74		
My peers care about me and value me	Unaware (0-2)	204	1.74	1.707	0.000	0.000
	Aware of SWDs (3-5)	62	2.76	1.817		
I spend time outside of class with my ... peers	Unaware (0-2)	204	1.16	1.58	0.000	0.000
	Aware of SWDs (3-5)	62	2.35	1.812		
Because of experience, I am more comfortable around ...	Unaware (0-2)	204	1.87	1.774	0.000	0.000
	Aware of SWDs (3-5)	62	2.84	1.71		

Because of experience, more accepting and patient ...	Unaware (0-2)	204	2.21	1.853	0.000	0.000
	Aware of SWDs (3-5)	62	3.32	1.735		
Because of experience, more respectful ...	Unaware (0-2)	204	2.86	1.975	0.000	0.000
	Aware of SWDs (3-5)	62	3.85	1.556		
I feel better about myself since shared classes	Unaware (0-2)	204	1.72	1.727	0.002	0.000
	Aware of SWDs (3-5)	62	2.52	1.79		

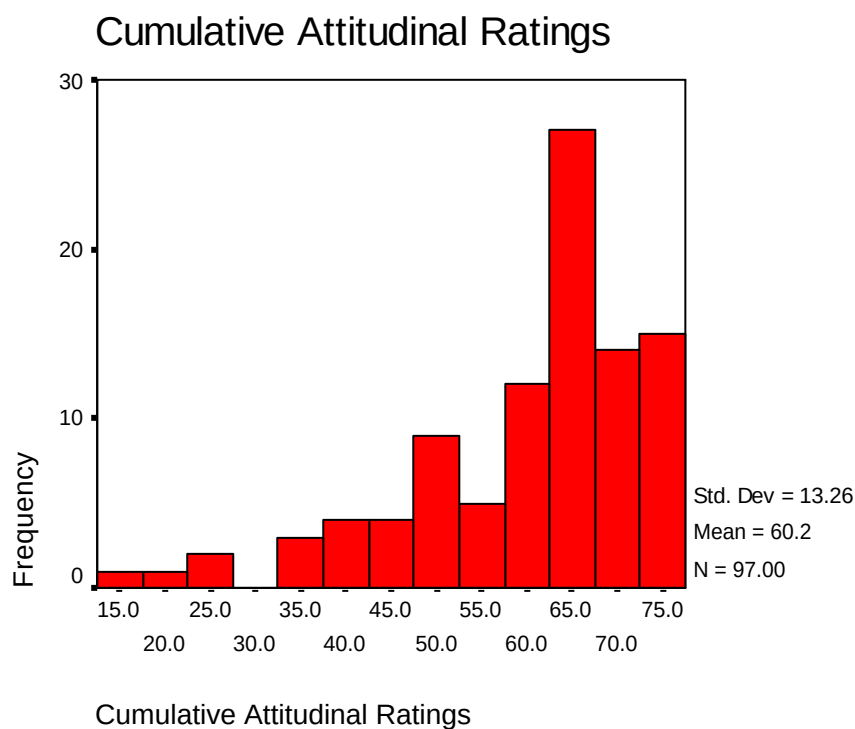


Figure 1. Cumulative Attitudinal Ratings for Included Students

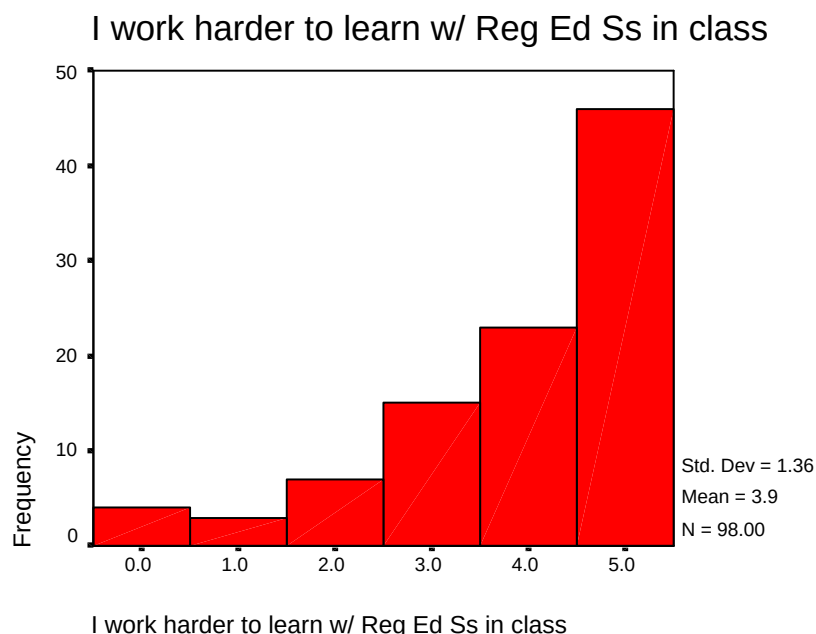


Figure 2. Ratings for Students with Disabilities to the item, “I work harder to learn when I am included with my regular education peers.”

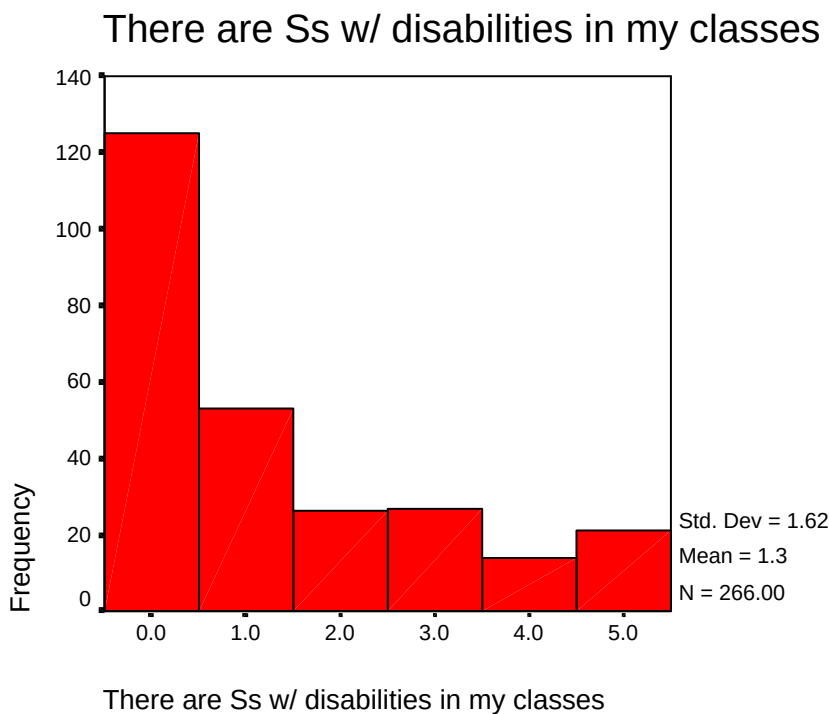


Figure 3. Histogram for Ratings from Regular Ed Students for “There are students with disabilities in my classes”.

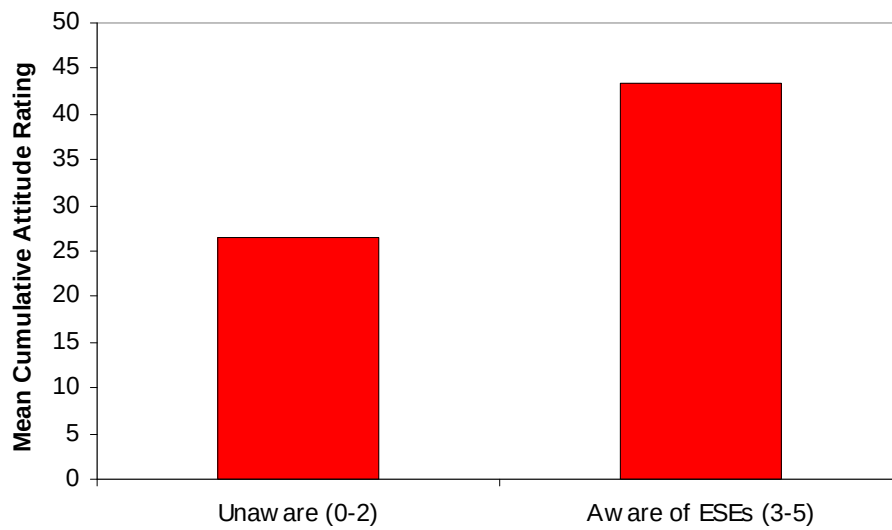


Figure 4. Mean Cumulative Attitudinal Ratings from Regular Ed Students Unaware versus Aware of Students with Disabilities (SWD) students included.

Student Survey

Teacher:

Does this student have an IEP? Y N

Student:

Date: _____

School _____

Grade: _____

Student number: _____

You are in classes that have some students that need different kinds of help to learn well.

Polk County School District is doing a study of how this works for students. Please be honest in your responses. There are multiple surveys being given, and no one will know which survey YOU get, or anyone else gets.

Please read each statement and report the degree to which you agree using the rating scale provided, from zero (0 = Totally DISagree) to five (5 = Totally AGREE):

		I totally DISagree	I totally AGREE
1.	There are students with disabilities in my classes.		
2.	I like being in classes with students with disabilities.		
3.	My classes are better because it includes students with disabilities.		
4.	I learn better in classes with students with disabilities.		
5.	I learn better in my classes with students with disabilities because there are multiple teachers or adult professionals helping students.		
6.	I learn better in my classes with students with disabilities because teachers teach in a lot of different ways.		
7.	The students with disabilities learn better in this class because we are all treated fairly.		
8.	Because of my classes that include students with disabilities, I understand now that students with disabilities are not really “disabled”, but that they just learn differently.		
9.	My classmates with disabilities are equal members of the class.		
10.	I care and value my peers with disabilities.		
11.	I have friends with disabilities.		

12. My peers with disabilities in my classes care about and value me.
13. I spend time outside of class with my peers with disabilities that I met in my classes.
14. Because of my experience with students with disabilities in classes, I am more COMFORTABLE around people with disabilities.
15. Because of my experience with students with disabilities in classes, I am more ACCEPTING and PATIENT with people with disabilities.
16. Because of my experience with students with disabilities in classes, I have more RESPECT for people that are different than me, like those that have different beliefs, different ethnic backgrounds, different social background, etc.
17. I feel better about myself since I have had classes that include students with disabilities.

Open-ended

18. What I LIKE MOST when students with disabilities are included in my regular education classes is
19. What I LIKE LEAST when students with disabilities are included in my regular education classes is.....

Student Survey

Teacher:

Does this student have an IEP? **Y** **N**

Student:

Date: _____

School _____

Grade: _____

Student number: _____

You are in classes that have some students that need different kinds of help to learn well.

Polk County School District is doing a study of how this works for students. Please be honest in your responses. There are multiple surveys being given, and no one will know which survey YOU get, or anyone else gets.

Please read each statement and report the degree to which you agree using the rating scale provided, from zero (0 = Totally DISagree) to five (5 = Totally AGREE):

How many school years have you been included in regular classrooms *before* this year? ____ years

- | | I totally
DISagree | I totally
AGREE |
|--|-----------------------|--------------------|
| 1. I have always been in regular education classes before this year. | | |
| 2. I like being in classes with regular education students. | | |
| 3. My classes are better because they include regular education students. | | |
| 4. I learn better in classes with regular education students. | | |
| 5. I learn better in my classes because we have multiple teachers or adult professionals helping students. | | |

6. I work harder to learn when I am included with my regular education peers.
7. I learn better in my regular education classes because teachers teach in a lot of different ways.
8. I learn better in my regular education classes because we are all treated fairly.
9. Because of my regular education classes, I understand now that students with disabilities are not really “disabled”, but that they just learn differently.
10. All my classmates are equal members of the class.
11. I care about and value my regular education peers.
12. I have regular education friends.
13. My regular education peers in my classes care about and value me.
14. I spend time outside of class with my regular education peers that I met in my classes.
15. Because of my experience with regular education students in classes, I am more COMFORTABLE around my peers.
16. Because of my experience with regular education students in classes, I am more RESPECTFUL of people that are different than me, like those that have different beliefs, different ethnic backgrounds, different social background, etc.
17. I feel better about myself since I have had classes with regular education students.

Open-ended

18. How many school years have you been included in general education classrooms BEFORE this year? How many years has it been since you were pulled out for certain subjects? (tell us the number of years):
19. What I LIKE MOST about being included in regular education classes is
20. What I LIKE LEAST about being included in regular education classes is.....

References

- Baker, J.M. & Zigmond, N. (1995). The meaning and practice of inclusion for students with learning disabilities: Themes and implications from the five cases. *The Journal of Special Education*, 29, 163-180.
- Barclay, J., Holmes, S., Elmore, D., Dupuis, B., Lewis, V. & Shaha, S.H. (2006). Closing the Gap: Inclusion for maximizing the impact of exceptional student education programs. *International Conference on Education: Proceedings*. Honolulu. 4, 229.
- Bernhardt, V. (1997). *Data analysis for comprehensive school-wide improvement*. Larchmont, NY: Eye on Education.
- Brady, M.P. & Taylor, R.D. (1989). Instructional consequences in mainstreamed middle-school classes: Reinforcement and corrections. *Rural and Special Education*, 10, 31-36.
- Daniels, S.E. (2002). First to the top. *Quality Progress*, May, 2002.
- Davis, W.E. (1989). The Regular Education Initiative debate: Its promises and problems. *Exceptional Children*, 55, 440-446.
- Dewey, J. (1916). *Democracy in Education*. Republished in 1966, NY: The Free Press.
- Elmore, D., Collins, D., Lewis, V. & Shaha, S.H. (2006). Smaller Learning Communities: A high school in crisis soars. *International Conference on Education: Proceedings*. Honolulu. 4, 1801.
- Fink, J. (2004). Conclusions on inclusion. *The Clearing House*. 77(6), 272-274.
- Fuchs, D. & Fuchs, L.S. (1988). An evaluation of the Adaptive Learning Environments Model. *Exceptional Children*. 55, 115-127.
- Fuchs, D., Fuchs, L.S. & Fernstrom, P. (1993). A conservative approach to special education reform: Mainstreaming through transenvironmental programming and curriculum-based measurement. *American Educational Research Journal*. 30, 149-177.
- Huefner, D.S. (1988). The consulting teacher model: Risks and opportunities. *Exceptional Children*, 54, 403-114.
- Kavale, K.A. (2002). Mainstreaming to full inclusion: From orthogenesis to pathogenesis of an idea. *International Journal of Disability, Development and Education*, 49(2), 201-214.
- Klingner, J.K., Vaughn, S., Schumm, J.S., Cohen, P. & Forgan, J.W. (1998). Inclusion or pull-out: Which do students prefer? *Journal of Learning Disabilities*, 31(2), 148-158.
- Lewis, V.K., & Shaha, S. H. (2003). Maximizing learning and attitudinal gains through integrated curricula. *Education*, 123:3.
- Salisbury, C.L., Gallucci, C., Palombaro, M.M. & Peck, C.A. (1995). Strategies to promote social relations among elementary students with and without severe disabilities in inclusive schools. *Exceptional Children*, 65, 125-138.
- Shaha, S.H., Lewis, V.K., O'Donnell, T.J. & Brown, D.H. (2004). Evaluating professional development: An approach in verifying program impact on teachers and students. *Journal of Research in Professional Learning*. 1(1), pg. 1. Lead article for publication launch.
- Snyder, R.F. (1999). Inclusion: A qualitative study of inservice general education teachers' attitudes and concerns. *Education*, 120(1), 173.
- Soodak, L.C., Podell, D.M. & Lehman, L.R. (1998). Teacher, student, and social attributes as predictors of teachers' responses to inclusion. *The Journal of Special Education*, 31(4), 480-497.

State Guidelines for ESE Classification (2006).

http://www.firn.edu/doe/eias/dataweb/database_0506/student_0506/st77_25.pdf.

Wang, M.C. & Birch, J.W. (1984). Comparison of a full-time and mainstreaming program and a resource room approach. *Exceptional Children*, 51, 33-40.

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What Does Health Have to Do with Transition? Everything!

Ceci Shapland, Co-Director of the Healthy & Ready to Work National Center.

Introduction

Adolescence is a time for dreaming—for youth to imagine and set a course for the future. High school students naturally spend time imagining the future—if and where to continue their education, to find a job or pursue a career, to move away from home, or to start a family. The Individuals with Disabilities Education Act (IDEA) includes a process to help youth with disabilities turn their dreams into reality. This Parent Brief provides information on the benefits of and strategies for including health in the Individualized Education Program (IEP) process.

For each student with a disability beginning at age 14 (or younger, if determined appropriate by the IEP team), IDEA requires that the IEP include a statement of transition service needs [§300.347(b)]. Transition services are a coordinated set of activities that promotes movement from school to post-school activities, including postsecondary education, vocational training, employment, continuing and adult education, adult services, independent living, or community participation [§300.29].

It is not common practice to identify health-related needs and goals when developing a statement of transition services within a student's IEP. However, lack of attention to health needs and health management can jeopardize goals for learning, working, and living safely in the community. For this reason it is important that young people with disabilities and special health needs know how to manage their own health care and work with appropriate professionals as partners in their care.

Health is an important factor to include even if chronic health concerns do not exist. All people must deal with health problems and learn how to maintain good health.

Transferring responsibility for self-care to an adolescent is a complex process. It requires assessing a variety of factors, including the complexity of a youth's health needs, his or her physical and cognitive abilities and degree of self-determination, as well as family factors (Kelly, Kratz, Bielski, & Rinehart, 2002). Cultural factors such as values, health care practices, and beliefs about disability must also be considered (Geenen, Powers, & Lopez-Vasquez, 2001).

The IEP lends itself well to evaluating factors needed for successful health outcomes as youth transition from special education to the adult world. Their needs can easily be incorporated into the IEP as annual goals and objectives, or benchmarks.

Addressing Family Health-Care Concerns

Family involvement generally contributes to better school and medical outcomes. Because it is not yet common practice, families may find they have to bring health-care concerns to the attention of the IEP team in order for their son or daughter's health needs to be addressed. It can also be very difficult for parents to give full responsibility for health issues to a young adult because of the obvious dangers of mismanagement.

Starting at an early age, planning ahead and identifying safety nets and emergency plans are important. Physicians can help youth and families solve problems in these areas.

It is beneficial to clearly identify concerns and discuss best- and worst-case scenarios. Support and emergency plans can be developed, and youth can become aware of the impact of certain behaviors on their health in order to make informed choices. This approach has been successful in alleviating some fears and providing teens with a better understanding of how to maintain their health. These and other health-care issues can be addressed in the statement of transition services in a student's IEP.

Following Joe

At age 19, Joe is a dynamic young man who aspires to be a chef as well as to have his own apartment. Joe has mild mental retardation and a severe seizure disorder. His health depends on how well he remembers to take his medications and follow his doctor's advice about getting enough rest and avoiding alcohol. Joe currently lives at home, and his mother reminds him to take his medications and follow the doctor's recommendations.

Joe is meeting the transition goals in his IEP related to employment, postsecondary education, and community living. In the past year, Joe has attended a community college to study food preparation, and hopes to graduate as a sous-chef (an assistant to a head chef) at the end of the semester. Joe's mother has found him an apartment in the city with community support nearby.

As graduation approaches, however, Joe's mother is concerned about how he will manage his health and seizure disorder when he moves from the family home to his own apartment. Joe's mother has some important concerns that can be addressed as part of Joe's transition planning process. His health needs greatly affect how he functions day-to-day and will influence his ability to keep a job and live on his own with limited support. Despite the excellent planning for job training, employment, and a new home, all Joe's plans could be in jeopardy if his health needs are not addressed as part of the transition planning process.

Transition and the Medical Community

During the past 20 years, awareness of health as an important part of transition planning has been growing within the health-care community. In 1993, the Maternal and Child Health Bureau (MCHB) established the Healthy and Ready to Work Initiative. Today, projects around the nation are working with state health departments, hospitals, school systems, families, and youth to ensure that health is part of the transition process and to provide system of change models.

In 2002, MCHB funded a Healthy and Ready to Work National Center to provide information and resources for families, youth, health and education agencies and professionals, and others involved with youth who have special health needs.

A recent American Academy of Pediatrics position paper (2002) provides guidance to health-care providers on how to help youth with disabilities move from a child-focused to an adult-focused health-care system. The Academy agrees with others that "health-care transition facilitates transition in other areas of life as well, such as work, community, and school."

Making It Work: Health and the IEP Process

Although inclusion of health related needs as part of transition planning is growing within the health-care community, putting this principle into practice continues to be a challenge—particularly because physicians are generally not participants in the IEP. The key question remains: How can schools consistently and creatively include health issues in transition planning?

School nurses generally assess the health status of students with disabilities and present information to the IEP team in a written statement. This is an important step in the IEP process. However, this assessment does not address health as a life area that may need to be considered to promote independence and transition to adulthood.

Youth and families need to learn strategies to effectively manage health issues. For example, youth may benefit from having a filing system to keep medical records organized, to know when to make follow-up appointments, and to find historical information about diagnoses and treatments.

Health and Key Areas of Transition

Viewing health as an element of transition planning may include assessing a student's needs in several key areas of transition. For example, consideration may be given to how health might affect employment choices, post-secondary education, and independent living. The IEP team may develop health maintenance plans and examine transition choices that are consistent with the student's health needs. The following are health questions related to several critical transition decisions. The questions address the needs of Joe, the young man in the example introduced earlier in this brief.

Jobs and Job Training

- Does Joe need to take his medication at work? If so, what arrangements need to be made to accommodate this?
- Will Joe's medication affect him on the job? Will it make him drowsy? If so, should the timing of his dosage be readjusted to his work schedule? Does this mean that changing his work hours may endanger his health?
- Should he disclose his seizure disorder to his supervisor and co-workers?
- Are there job duties that he cannot do, such as operating some machinery, because of certain medications?

Postsecondary Education

- Does Joe need to take his medication while in school?
- How will it affect his performance?
- Should he disclose information about his health to the teacher?
- Will Joe need accommodations in his schedule or course load to maintain his health and be successful in school?

Home Living

- Does Joe understand his seizure disorder?
- Does he carry his own insurance card and emergency medical information?
- Does he have a system for remembering to take his medication on his own?

- Does he know the side effects of his medication and important changes in his condition that he should report to his doctor?
- Does he understand the healthy lifestyle he needs to lead so his seizures will be in better control?
- Does he know the importance of healthy meals, exercise, rest, and good hygiene?
- Does he have an emergency plan in case he needs help at home, work, or school?

Community Life

- Does Joe have an adult medical practitioner who will attend to his adult health needs?
- Does he know how to go to the doctor and how to use public transportation to get there?
- Does he know when, how, and where to fill a prescription?
- Will he continue on his family's health insurance plan or have insurance through work or a public program?

Leisure and Recreation

- Does Joe understand the effects of recreational drugs, alcohol, or tobacco on his health and seizure disorder?
- Should he tell his friends about his seizure disorder?
- Will his medication affect his choice of activities?

*Health Transition Goals and Objectives**

The following are possible health transition goals and objectives that Joe and his family might consider.

Goal: I (Joe) will learn about my seizure disorder and my health needs to ensure my good health, so I can live more safely in the community.

Objective 1: I will learn five facts about my seizure disorder and make a 10-minute presentation in health class.

Objective 2: I will learn two or three side effects of my medication and learn when to report any changes in side effects or new symptoms to my doctor.

Objective 3: I will develop an emergency plan for when I am living on my own.

Objective 4: I will identify and interview two or three physicians to choose a new doctor who will help me manage my adult health care.

These are a few possible goals and objectives for Joe as he continues through his transition. Others can be added as Joe accomplishes these objectives and learns more about managing his own health care. Youth need to receive information that is understandable and appropriate to their individual needs in order to make good decisions. The transition process helps a young person begin to manage his or her own health by 1) providing a structure for gathering

information from physicians, and 2) accessing the expertise of the IEP team to ensure the information is easily learned and understood and to assist in making any modifications or accommodations. Including health goals and objectives like those above in the IEP transition planning process allows an adolescent to learn skills needed to make health decisions, identify resources in the community, and achieve successful postschool outcomes in all areas of transition.

* Keep in mind that unless transition services are considered special education, i.e., provided as specially designed instruction or related services required to assist a student with a disability to benefit from special education [§34 FR 300.29(6)], IDEA only requires that an IEP include a statement of transition services needs, not goals and objectives.

References

American Academy of Pediatrics. (2002). Improving transition for adolescents with special health care needs from pediatric to adult-centered care. *Pediatrics*, 100(8), 1304-1306.

Geenen, S., Powers, L. E., & Lopez-Vasquez, A. (2001). *Parents as partners: Understanding and promoting the multicultural aspects of parent involvement in transition planning*. Portland, OR: Oregon Health Sciences University, Center on Self-Determination.

Kelly, A. M., Kratz, B., Bielski, M., & Rinehart, P. M. (2002). Implementing transitions for youth with complex chronic conditions using a medical home. *Pediatrics*, 100(6), 1322-1327.

Author Ceci Shapland is a Co-Director of the [Healthy & Ready to Work National Center](http://www.ncset.org/publications/viewdesc.asp?id=2967). Article excerpted from National Center on Secondary Education and Transition (NCSET) at <http://www.ncset.org/publications/viewdesc.asp?id=2967>. This report was supported in whole or in part by the U.S. Department of Education, Office of Special Education Programs, (Cooperative Agreement No. H326J000005). The opinions expressed herein do not necessarily reflect the policy or position of the U.S. Department of Education, Office of Special Education Programs, and no official endorsement by the Department should be inferred.

*Teaching Children With Autistic Spectrum Disorder:
A Preschool Teacher Survey To Determine Best Practice Approach*

Joanne Grossi-Kliss,OTR/L

Teaching children with Autistic Spectrum Disorder (ASD) can be the most challenging to preschool teachers because of the complexity of this brain disorder. A child's life is affected, whether its communication and language, social and play skills, activities of daily living, self-regulation behaviors, and sensory impairments. Therefore, a teacher over a class of preschoolers including children with ASD, deciding what skills to work on can be daunting. The purpose of this study is to explore the best approach to teaching children with Autistic Spectrum Disorder in the classroom. When teachers are presented with different skill areas (social, play, following class routine, self-regulation behaviors, communication, cognitive, sensorimotor, activities of daily living, and group activities) what do they feel are the most to least important skills when working with a child with Autistic Spectrum Disorder?

Introduction

Children with Autistic Spectrum Disorder (ASD) have so many needs that teachers are often overwhelmed at where to start to teach them. Teachers often will comment that the needs of children vary from day to day. One day it could be to work on communication and the next day following a classroom routine is most important. There are so many variables affecting children with ASD such as parental and early intervention, environmental surroundings, peer interaction, nutrition and health, adult support and consistent understanding and teaching of basic developmental skills (Journal of Pediatrics 2001, p.e85). Teachers need to be proficient in their knowledge of this disorder to guide preschool children in a program that helps a child progress in all skills.

Importance of Study

If the goal for any preschool program and teacher is to have a child be successful in learning either with a developmental or play based approach, deciding what skills to work on is paramount. Often in an inclusive setting where a child with Autistic Spectrum Disorder (ASD) is with age developing peers, different strategies are used, such as:

1. Teaching communication and social competence.
2. Use of instrumental strategies that maintain the natural flow classroom activities.
3. Teach and provide opportunities for independence.
4. Proactively and systemically build a classroom community that includes all children.
5. Promote generalization and maintenance of skills (Schwartz, Billingsley, McBride, n.d.)

These strategies are important when developing a positive relationship between a teacher and child. One study by Rodger and Lewis (1989), stated that the relationship was "an important factor...showed the children made significant gains over those expected based on previous rates of progress, in social and language development" (Shopler, Bourgondien, & Bristol, 1993, p.66). A teacher can help a child become ready for school. Meisels (1999) proposed "Readiness must be conceptualized as a broad construct that incorporates all aspects of a child's life that contribute directly to that child's ability to learn. Definitions of readiness must take into account the setting, context, and conditions under which the child acquires skills and is encouraged to

learn”(early Developments, 1999,p.8). According to Grove and Fisher (as cited in Elkins, Kraayenoord, & Jobling, 2003, p.122), “it may be difficult for parents to find school with personnel who are sufficiently knowledgeable about inclusive educational goals in order to provide appropriate services to their child”. It is important to find out how knowledgeable and informed preschool teachers are of the necessary skills needed to work with children especially those with ASD.

Statement of Problem

The basic premise or expectations of parents and preschool teachers is that children will learn if taught. It is very important that preschool teachers implement programs that meet the needs of children for readiness skills but provide a curriculum that can be modified for those with disabilities. According to Handleman (1992), “Curriculum development for young children with Autism is an intricate task”. “Selecting appropriate goals and objectives, determining accurate levels of instruction, identifying and creating suitable materials often present challenges for the teacher” (Handleman, & Harris, 2001, p.6).

Children with ASD can be taught skills, but the rate of continuity, and skill building depends on the teacher. Which skill is most important for a teacher to teach? Therefore as we revert back to the basic premise for this paper, a survey of preschool teachers had to be done to assess what they felt was most important to least important when working with a child with ASD.

This survey will help to address what skills teachers would begin to work on with a child with ASD in their preschool class. Finding a skill that everyone would agree on is difficult. In an article by Stone and Rosenbaum, (1988 p.403), the researchers looked at parents, teachers and autistic specialists. They found that the responses of both parents and teachers were to “harbor misconceptions regarding cognitive, developmental, and emotional features” about autism. Therefore, if all three of these groups have different misconceptions of a disorder, teachers may find that their views about this disorder are varied as well.

Preschool teachers and programs should provide “two dimensions of quality for best practice approach: process quality and structural quality. Process quality is the materials, learning opportunities, safety routines, interactions, and activities. Structural quality is the size of the group, education and training of the staff. Teachers should be able to describe their curriculum, why it was chosen and what they are accomplishing with it”(Espinosa, 2002, p.1). Teachers however, have varying viewpoints on which skills to teach first, especially to child with Autistic Spectrum Disorder. It is apparent that it would be difficult to get teachers to rate one skill over another with a high majority. In an interview with Jean Gray (personal communication, January 21, 2006), a special education teacher “all skills are important to children and one is just as important as the other, it depends on the child”. That means that one skill will not have an overwhelming majority because there are too many variables.

Literature Review

A literature review was done both with books on autism and internet searches to see if a survey was given by an educator or medical practitioner to preschool teachers to speculate which skills were most important when working with children with Autism Spectrum Disorder. There was no survey done on this particular subject matter. The two main areas of concentration that are so often written about are that social and communication skills are needed for children with autism

to improve in order to succeed in the community. “When children with autism learn how to initiate spontaneous communications within natural social contexts and to respond appropriately to the communication of others, they can begin to appropriately control their environment and develop positive relationships with others”(Schwartz, et al, p.2).

According to statistics provided by the US Department of Education, the children with Autism serviced by IDEA from 1992 to 2000 has greatly increased. Every state has seen an increase of cases of children with autism. In the year 2000, the increases throughout every state, showed the lowest percentile increase range from 10% to the highest of 48,600%. The medium percentile increase in all 50 states was 535%.

In a report by the New York Department of Special Education on *The Availability and Effectiveness of Programs for Preschool Children with Autism*, a survey was sent out to preschool programs to study how many children with autism attended a preschool program in the school year 2000 to 2001. Out of 292 preschool special education programs reporting, 191 programs served 5 or more children with autism, which were located in 38 counties statewide. Of these children, 65 % were in a self-contained class and 35 % were in an integrated setting. In 191 preschool programs, 36% of preschool teachers who taught children with autism, classified themselves in their knowledge of working with autistic children as “experts to a large degree”, 38% as “somewhat”, and 17 to 25% as “not at all expert”. How can 17 to 25% of teachers working with children with ASD in 191 programs throughout New York have some to no knowledge in teaching and be able to meet the needs of these children? In a national pre-kindergarten study out in May 2005 entitled, *Massive National Study Finds Many PreKindergarten Teachers Underpaid; Others Lacking Required Credentials*, 3,898 pre-kindergarten teachers were surveyed from all of the nations 52 statewide pre-kindergarten systems in 40 states. Key findings of this study about the education of pre-kindergarten teachers nationally revealed that, 13% had a high school diploma, 14% had an associates degree, 49 % had a bachelors degree and 24% had a masters or higher. This study also reported that pre-kindergarten teachers in four states: West Virginia, Maryland, New York and South Carolina had a majority of teachers who work with children had masters, but teachers in Alaska and Florida had only a high school diploma.

Inclusion Settings

When one considers that the least restrictive environment for children with disabilities is often sought, then the primary focus of early intervention for children with disabilities is an inclusive setting. Teachers without adequate training and education can alter the maximum potential of children with disabilities including ASD in the early years. Providing a curriculum that works on readiness skills is very important in meeting all children’s needs in early intervention. More and more children with ASD are in inclusive settings because it provides a way to “enhance the child’s development, provide support and assistance to the family and to maximize the child and family benefit to society”(What Is Early Intervention, n.d. ¶ 3). Teachers should have knowledge ranging from basic to proficient in knowing what areas and skills to work on with all children and those with ASD. As cited in the above study, 13% of pre-kindergarten teachers had only a high school diploma, which should be unacceptable given the mix of disabilities of children in inclusive settings. Another way of thinking about this study is that 13 % or 449 out of 3898 teachers had only a high school diploma, and do not have any idea what readiness skills are, and what to work on with an age appropriate child, let alone one with ASD. Grove and Fisher in

1999 (as cited in Elkins, et.al) “found that the parents in their study viewed staff as lacking in knowledge about their child, and they found it difficult to assess teachers or other staff willing both to provide them with information and receive information from them”.

Method

Participants

The teachers surveyed were all women and one male, with ages from 24 to 62yrs. old with teacher experience from 5 to 35 years. The schools in which the teachers work were widely spread out, located in different cities to suburban areas all within 75 miles of each other. Out of the 50 teachers surveyed, 33 are special education teachers from Intermediate Units, and 17 are regular education teachers from 5 different nursery schools.

The teachers were given a questionnaire survey and asked to fill it out at their convenience within a two-week time frame. Where needed, the teachers were given envelopes to send the information back; otherwise the questionnaires were either picked up or sent via interoffice mail. This survey asked the teachers to rate the most to least important (1 >10) skills they feel as teachers they need to work on with a child with ASD. There were 50 questionnaire surveys handed out with 43 returned, and 41 filled out correctly. This indicates that the survey is valid as stands because 95% were done correctly.

A quantitative research methodology was done for this study. The teachers rated from 1 to 10 what they felt is the most to least important skill when working with a child with ASD.

QUESTIONNAIRE

Key: Most important =1

Least important=10

- | | |
|---------------------------------------|-------|
| 1. Social Skills | _____ |
| 2. Play Skills | _____ |
| 3. Following Daily Classroom Routine | _____ |
| 4. Self-Regulation Behaviors | _____ |
| 5. Communication Skills | _____ |
| 6. Cognitive Skills | _____ |
| 7. Motor Skill (fine and gross) | _____ |
| 8. Activities of Daily Living | _____ |
| 9. Sensory Systems | _____ |
| 10. Participation in-group activities | _____ |

Social skills: eye contact, joint attention, responding to adult direction, recognize emotional states, peer friendships

Play skills: reciprocal play, turn taking, sharing, theme play, pretend play, playing close to others, interest in toys

Following Daily Classroom Routine: getting into class, putting book bag and coat away, following schedule, moving around the structure of the class

Self-Regulation Behaviors: repetitive movements, spinning toys, hand flapping, arousal state (high =to active or low = no motivation)

Communication skills: shift gaze of person to object, gesturing, pointing, use of picture schedule, expression of emotion, language pragmatics

Cognitive Skills: readiness skills, object permanence, concept development, decision making, problem solving,

Motor Skills: Gross motor: playing on playground equipment, jumping, ball catching, walking up\downstairs. Fine motor: using two hands, holding pencil to color or scissor cutting

Activities of Daily Living: independent feeding (using utensils, cup), toilet training, coat on/off independently, hand washing,

Sensory Skills: providing activities that give movement, deep pressure and heavy activities, oral motor stimulation to prevent putting objects in mouth,

Participation in-group activities: sitting for circle, art projects, arm movements with music, sitting in seat

Procedure

Permission to conduct this survey was given by the preschool supervisor at the Capitol Area Intermediate Unit (CAIU), directors of public nursery schools, a private nursery school, and head start. The director of the preschool program at the CAIU reviewed the questionnaire before it was given to any teacher and director. Permission was obtained two to three days by each director before the survey was handed out, except in three nursery schools who took the survey that day. The teachers were asked to fill out the questionnaire survey on what they feel as a teacher is important when working with children with ASD.

Results

The surveys were returned and the data was placed on a data collection table. After all 41 surveys were tallied, totals were computed and results were observed.

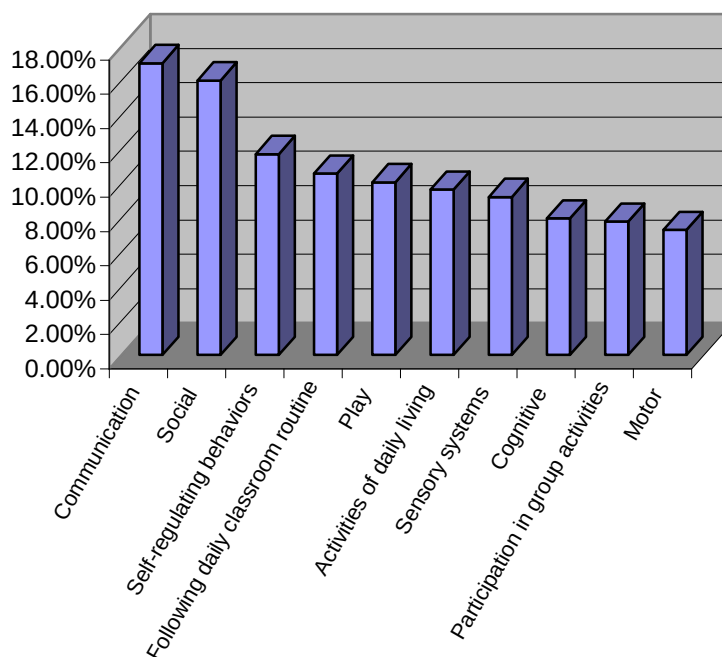
The teachers ranked the skills in this order from most too least important when working with children with ASD:

1. Communication Skills.
2. Social Skills.
3. Self-Regulation Behaviors.
4. Following Daily Classroom Routine.
5. Play Skills.
6. Activities of Daily Living.
7. Sensory Systems.
8. Cognitive Skills.
9. Participation in Group Activities.
10. Motor Skill (fine and gross).

Table 1

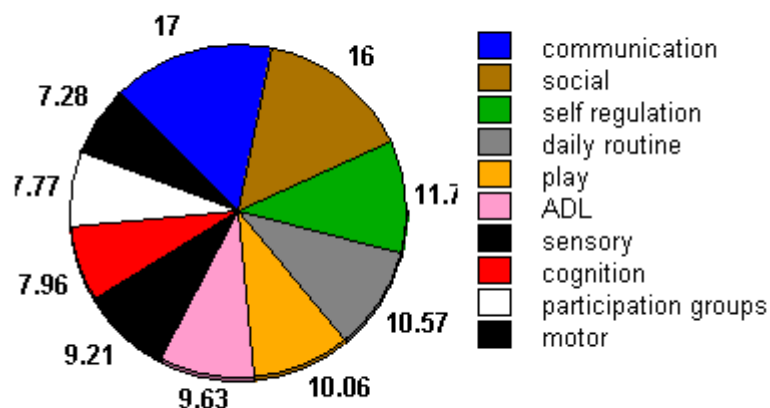
SKILLS:	PERCENTAGE
Communication -----	17%
Social -----	16%
Self-Regulation Behaviors -----	11.70%
Following Daily Classroom Routine -----	10.57%
Play-----	10.06%
Activities of Daily Living-----	9.63%
Sensory Systems-----	9.21%
Cognitive-----	7.96%
Participation in Group Activities-----	7.77%
Motor-----	7.28%

Skills



Figures 1 and 2

Preschool Skills



The results of the questionnaire survey represented a close relationship between communication (17%) and social skills (16%). Children with Autistic Spectrum Disorder need language to communicate with their peers and have interactions during play. Teachers feel the need for both of these skill areas to be developed. Boucher (1999) stated “playing is the norm in early childhood and a lack of play skills can aggravate children’s social isolation and underline their difference from other children” (as cited in *Play and Autism*, n.d. ¶ 9). According to Fitzgerald and Karnes (1987, p.31) “perhaps the most debilitating characteristic of young at-risk and

developmentally handicapped children is a lack of functional communication or a delay in the acquisition of early language skills” (as cited by Byers, n.d., p6.).

The lowest skill teachers’ felt needed worked on, was the motor area including both gross and fine motor skills. This would be logical since most autistic classes or children with ASD in inclusive settings have an Occupational Therapist (OT), and part of their focus is on fine and gross motor skills. Teachers would not need to concentrate on these skills because the OT would assist in supporting the child’s educational needs, and integrating different strategies to assist them with the curriculum. Motor skills are not a main concentration area of most importance to a teacher. Another understanding of this is that motor skills aren’t always affected to the degree that communication and social skills are.

There is a close percentage of skills with following daily classroom routine, and play skills, activities of daily living and sensory systems and cognitive and participation in group activities. Some teachers want the child to be able to follow the routine before any other skills are worked on, while others feel that play and interaction are very important to the child in preschool since it is the foundation of social skills and community interaction. The last grouping of cognition and participation in-group skills appear to go hand in hand since cognitive skills aid in interaction in groups.

It appears that the best practice approach when looking at the most important skills for preschool teacher who work with children with ASD, are communication and social skills. These two areas got the most votes and the percentages are very close to one another. However it is interesting to note that there was not an overwhelming majority of one skill. This questionnaire asked qualified teachers with years of experience from a variety of programs to identify what skills they would address when working with children with ASD. This study was made up of 2/3 special education teachers and 1/3 regular education teachers. It would be of interest to further this research study by asking these same teachers to fill out this questionnaire 6 months from now and see if the results are the same. It would also be of interest to ask the parents of the students in these class’ to identify the skills they think should be worked on by a teacher, then compare the two.

It is important as preschool teachers to decide and provide a curriculum that it is done with quality and skill building in mind. In order to do that, teachers need adequate education and training. How else can a curriculum be modified for the student’s special needs? From this survey, communication and social areas should be the main focus of the preschool program. These skills can be integrated in activities throughout the day. Some activities such as play centers, arts and crafts, peer modeling, show and tell, journal writing, snack helper, book reader, teachers assistant helper, and game helper are all ideas to get the children involved and increase language and social interaction in class.

The limitations of this study are that there was a small amount of teachers answering a very important question in regards to children with ASD.

Summary of Findings

It is seen that there are many differences with teachers in settings and in their educational status. This survey could be repeated in any state in the country in both private and public preschool, because it reflects the basic skills needed to teach children and assists teachers to reflect on the different curriculum areas within a preschool program. It would be interesting to note if the findings in the east coast are different than the west, or suburban versus urban areas. Regardless of the findings, it is very evident that teachers need continued education and knowledge about working with children with ASD.

Conclusion

In this vast growing society where children diagnosed with Autistic Spectrum Disorder have increased to almost epidemic levels, preschool programs with educated teachers and modified curriculum are vital. Research has shown that providing early intervention for children with disabilities increases their success rate in school. This study may assist some teachers in defining where to start in establishing their curriculum. However, it is the responsibility of every teacher and director of preschool programs in this country, to seek out further educational training, workshops, and best practice approach for the children they serve.

References

- Boucher, J. (1999). Editorial: interventions with children with autism methods based on play. *Child Language Teaching and Therapy*, 1999,15 (1) pp.1-5. In *Play and Autism* retrieved online on January 11,2006 from <http://www.nas.org.uk/nas/jsp/polopoly.jsp?d=306&a=3353>
- Byers, P. (n.d.). *Language use of preschool children in a child/parent education program* (pp.6). Unpublished master thesis, University of Saskatchewan, British Columbia, Canada. Retrieved online at <http://saskschoolboards.ca/research/students/01-06.htm>.
- Elkins, J., Van Kraayenoord, C., and Jobling, A. (2003). Parent's attitude to inclusion of their children with special needs. *Journal of Research in Special Education Needs*, 3, 122-129.
- Espinosa, L., M. (2002). High quality preschool: Why we need it and what it looks like. *National Institute For Early Education Research* (1). New York: Plenum Press.
- Fitzgerald, M.T., & Karnes, D.E. (1987). A parent-implemented language model for at-risk and developmentally delayed preschool children. In Byers, *Language use of preschool children* (pp 6).
- Grove, K.A. & Fisher, D. (1999). Entrepreneurs of meaning and Parents and the process of inclusive education. In I. Schwartz, *Including children with Autism in Inclusive Preschools: Strategies that work* (pp122).
- Handleman, J. S. (1992). Assessment for curriculum planning. In D. Berkell (Ed.), *Autism: Identification, education and treatment* (pp.77-88). Hillsdale NJ: Erlbaum.
- Handleman, J. S. & Harris, S. L. (2001). *Preschool education progress for children with autism* (2nd edition). Austin, Texas: Pro-ed.
- Kidsource Online (n.d.). *What is early intervention.* Retrieved January 12,2006 from <http://www.kidsource.com/kidsource/content/early.intervention.html>.
- National Association of Scholars (n.d.). *Play and autism*. Retrieved January 11, 2006 from <http://www.nas.org.uk/nas/jsp/polopoly.jsp?d=306&a=3353>.

- New York State Education Department--Office of Vocational and Educational Service (2004). *The availability and effectiveness of programs for preschool children with autism*. Retrieved January 11, 2006, from <http://www.vesid.nysed.gov/specialed/autism/preschoolstudy.htm>.
- Pediatrics (n.d.). Technical report: The pediatrician's role in the diagnosis and management of autistic spectrum disorder in children. *Pediatrics* (5), 85. Retrieved March 1, 2006 from <http://pediatrics.aappublications.org/cgi/content/full/107/5/e85>.
- Pew Charitable Trusts (May, 2005). *Massive national study finds many prekindergarten teachers underpaid: Others lacking required credentials*. Retrieved January 12, 2006 from <http://pewtrust.com/ideas/index.cfm?page=7&name-Grantee%20Press%20release&issue=26>.
- Rodger, S.J. & Lewis, H. (1989). An effective day treatment model for young children with pervasive developmental disorders. In E. Schopler, *Preschool issues in autism* (pp.66). New York: Plenum Press.
- Schopler, E., Van Bourgondien, and M., Bristol, M (Eds.). (1993). *Preschool issues in autism*. New York: Plenum Press.
- Schwartz, I.S., Billingsley, F.F. & McBride, B.M. (n.d.). *Including children with autism in inclusive preschools: Strategies that work*. Retrieved February 3, 2006, from <http://www.newhorizons.org/speeds/inclusion/information/schwartz2.htm>.
- Stone, W.L., Rosenbaum, J.L. (1988). A comparison of teacher and parent views of autism. *Journal of Autism and Developmental Disorders* 18,(3), 403-14. Retrieved January 11, 2006 from PubMed database, <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd>.
- University of North Carolina at Chapel Hill (1999, Winter). *Are we ready to teach?* Early Development Center. University of North Carolina at Chapel Hill.

*International Perspectives on Attention-Deficit/Hyperactivity Disorder: A Comparison of
Teachers in the United States and Sweden*

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A total of 157 general education elementary classroom teachers in the United States and 116 general education elementary classroom teachers in Sweden were sent surveys assessing how teachers in the United States and Sweden (1) view the use of stimulant medication to treat ADHD behaviors in children, (2) attribute the causes of ADHD behaviors, and (3) rate the acceptability of various interventions used to treat ADHD behaviors. Compared to Swedish teachers, U.S. teachers indicated that more children in their classrooms were diagnosed with ADHD and received stimulant medications to treat ADHD behaviors. Regarding causation, both groups believed that ADHD behaviors could have environmental and genetic causes. Teachers from both countries agreed that lacking basic academic skills could be a cause of inattention in the classroom. Although Swedish and U.S. teachers reported similar beliefs about the causation of ADHD behaviors, Swedish teachers viewed stimulant medication in a significantly more negative manner. In addition, a majority of Swedish teachers preferred an intervention package that did not include stimulant medication.

Attention-Deficit/Hyperactivity Disorder (ADHD) occurs in approximately three to seven percent of school-aged children according to the Diagnostic and Statistical Manual of the American Psychiatric Association, Fourth Edition Text Revised (American Psychiatric Association, 2000). In the U.S., the incidence of stimulant treatment in the school-age population has increased dramatically in the past few years. In a national survey of 19 school districts, Frankengerger, Lozar, and Dallas (1990) reported that only 1.47% of the students surveyed were diagnosed with ADHD and were receiving treatment with stimulants. More recently, LeFever, Dawson and Morrow (1999) reported mean rates of ADHD and concomitant use of stimulant medication as high as 10% in particular North Carolina school districts. LeFever et al. (1999) also found that 17% of white males in grades 2 through 5 were receiving stimulant medication. Rowland, Umbach, Stallone, Naftel, Bohlig, and Sandler (2002) completed a school-based survey that revealed 10% of the 6099 children included in the study had been identified as having ADHD and were being treated with stimulant medication.

In Sweden the use of stimulants to treat ADHD is currently believed to be much lower than in the United States. However, data indicate that despite a history of restrictions on stimulants, Sweden may have begun to follow the example of the United States. According to Bäsén (2000),

from 1996 to 1999 Swedish school age children treated with stimulant medication increased from 429 to 1,629, an increase of 400% in three years. More current data indicate that approximately 3,000 children (less than 0.2% of Swedish children) are being treated with stimulant medication in Sweden, a country of approximately 9 million people (Medical Products Agency, 2003).

Though professionals in Sweden diagnose children with ADHD, they also have a related condition called deficits in attention, motor function, and perception (DAMP). Although considerable diagnostic overlap exists, the DAMP diagnosis is narrower and distinct in its addition of specific motor and IQ criteria. DAMP is defined as severe problems in at least one of the following areas or moderate problems in at least two of the following areas: attention span, activity level, vigilance and ability to sit still. In addition, one of the following criteria must be met: (1) fine motor dysfunction as documented by a detailed neurological exam, (2) gross motor dysfunction as documented by a detailed neurological exam, or (3) perceptual/visual motor dysfunction as documented by a 15 IQ point discrepancy between the Block Design or Object Assembly subtests of the Wechsler Intelligence Scale for Children-III (WISC-III) and the Full Scale IQ score or dysfunction as documented by a visuo-motor dyscoordination test (Landgren, Kjellman, & Gillberg, 1998).

Causes of ADHD

The entire range of causes and how these causes interact to create the disorder of ADHD is generally unknown (Snider, Busch, & Arrowood, 2003). Jerome, Gordon, and Hustler (1994) reported that a majority of teachers perceive the causes of ADHD to be primarily biological and genetic rather than psychosocial (e.g., parenting practices, chaotic family structure). In a more recent study, Frankenberger, Farmer, Parker, and Cermak (2001) reported that school psychologists generally agreed that ADHD was caused by brain malfunction. Leo and Cohen (2003) reviewed data from imaging studies widely viewed as support for the brain deficit hypothesis. They concluded that the existing body of research was not sufficient to identify a specific *biological basis* for ADHD.

Researchers have also posited other potential causes of ADHD behaviors, which often lead to a diagnosis of ADHD. Weber, Frankenberger, and Heilman (1992) reported significant drops in academic achievement scores the year before children were placed on stimulant medication. The authors posited that a child in the early years of elementary school may become so frustrated with his/her inability to read that the student loses motivation, becomes restless and stops paying attention (Weber et al., 1992). Similarly, Snider et al. (2003) asserted that inattention in the classroom is commonly caused by an inability to complete school tasks.

Treatment of ADHD

Regarding the effectiveness of various interventions for ADHD, the most comprehensive study to date is The Multimodal Treatment Study of Children with ADHD (MTA Cooperative Group, 2004). The initial results of the MTA study published in December of 1999 demonstrated significantly higher effects on ADHD symptoms for the long-term combined treatment (medication and behavioral treatment) and the medication alone treatment than for behavioral

treatment alone. In several other areas of functioning, including academic performance, the combined treatment was consistently superior to the routine community care condition. However, the effect of behavioral treatment is highlighted when looking at the summer portion of the study (Pelham, et al., 2000). During this summer portion, the combined and behavioral treatment groups were compared. The children in the combined group were better on only five measures. On the remaining 30 measures, there were no significant differences between the two groups. This differed from the general MTA assumptions that the Combined group would do better than the BT group on these measures. The MTA studies elucidate the significant role that behavioral intervention can play in treating children with ADHD. Additionally, Sinha (2005) reported use of cognitive-educational interventions resulted in improved academic performance for non-medicated children with ADHD.

Attitudes Related to Stimulants

In the U.S., there appears to be growing acceptance among educators and parents of pharmacological treatments for childhood behavioral disorders (Frankenberger et al., 2001; Snider et al., 2003; Liu, C., Robin, A. L., Brenner, S., & Eastman, J., 2004). This acceptance of stimulant medication is significant because researchers have shown that, as a group, teachers appear to be those most likely to refer children for evaluations, which often result in a diagnosis of ADHD (Frankenberger et al., 2001; Snider et al., 2003).

Gillberg (1997) reported that in Sweden there has been less public and cultural acceptance regarding stimulant medications and treatment of children with stimulants. The origin for this attitude toward stimulants may be, in part, due to the abuse of these drugs while they were more openly prescribed in Sweden from 1939-1968. Methylphenidate (Ritalin) and all amphetamines and amphetamine-like drugs, were removed from the Swedish market in 1968 (except for use in a few rare conditions) after an epidemic of reported abuse cases (U.S. Pharmacist, 2000). However, within the last few years, debate has increased in Sweden about removing those restrictions. According to Larsson (2002) a series of plans and actions by psychiatrists and government agencies to further the use of amphetamines for medical purposes has resulted in a forceful sales promotion and growing use of stimulant treatment for school-age and pre-school Swedish children.

The purpose of this study was to determine and compare the rate of ADHD and concomitant treatment with stimulant medication in the U.S. and Sweden. The study was also designed to assess teachers' attitudes about the possible causes and treatments of ADHD. Finally, the study was designed to determine teachers' attitudes related to the use of stimulant medication to treat children diagnosed with ADHD.

Method

Participants

The sample included 400 general education elementary teachers in the state of Wisconsin (U.S.) and 242 general education elementary teachers in Sweden.

Instrument

A descriptive survey questionnaire was adapted from those used in Frankenger, et al. (2001) and Snider et al. (2003) studies. Teachers in the U.S. were given an English language version of a survey questionnaire, whereas teachers in Sweden were given a Swedish language version that was identical in content. Two bilingual psychologists from the research team, fluent in both English and Swedish, translated the survey. One of these researchers, a practicing school psychologist, originated from Sweden and is now living in the U. S. and the other, a practicing clinical psychologist, was a resident of Sweden. The survey was also shown to other Swedish/English speakers to determine the clarity and identical content of the survey items. The survey is described below.

Section One: Background Information. The survey asked the participating teachers questions about their background including: their sex, the grade levels and ages of the children they taught, number of years of teaching experience, overall number of students in their classroom, number of students in the classroom identified as having ADHD (DAMP in Sweden), and number of students in their classroom known to receive stimulant medication.

Section Two: Student Description. The survey included one vignette of a 9-year-old boy (*Christopher*) exhibiting behaviors consistent with ADHD and concomitant academic difficulties in the classroom (Carlson, 2003). All teachers received the same vignette, which used behavior considered diagnostic for ADHD in the DSM-IV-TR (American Psychiatric Association, 2000). The number of problem behaviors observed equaled the minimum number necessary to receive a diagnosis of ADHD combined type (behaviors of inattention and hyperactivity/impulsivity). In addition, the vignette depicted what is often considered the classic or pure ADHD child, which means DSM-IV-TR descriptors from other frequently comorbid diagnoses were not included. However, reading difficulties were mentioned in the vignette to highlight academic difficulties common in students with ADHD diagnoses.

Section Three: Student Description Items. After reading the vignette, the teachers were asked to respond to a series of questions with regard to the student in the vignette. Question responses were based on a six-point Likert scale ranging from 1-Strongly Disagree to 6-Strongly Agree.

Section Four: Intervention Methods. This section prompted teachers to read three interventions and answer six questions pertaining to their perceptions of intervention effectiveness and risks, as well as overall acceptability. Question responses were recorded on a five-point Likert scale. The scale descriptors changed depending on the question.

Section Five: General Questions. These questions did not refer to the vignettes but instead asked direct questions about ADHD, stimulant medication, and classroom behavior trends. Once again, question responses were recorded on a five-point Likert scale and the scale descriptors changed depending on the question.

Procedure

A list of elementary general education teachers was obtained from the Department of Public Instruction (DPI) in Wisconsin and Lärarförbundet (Sweden's Teacher Union) in Sweden. All participants were sent a cover letter explaining the purpose of the study assuring anonymity. Also included was a survey and a return envelope.

Initially, teachers from the U.S. and Sweden were to be sampled identically. However, privacy laws in Sweden did not allow teachers to be contacted directly. The U.S. sample of 400 first through fourth grade general education teachers was obtained directly by randomly sampling teachers using the file provided by Wisconsin's Department of Public Instruction. The Swedish sample of 242 teachers was obtained indirectly by contacting randomly selected rektors (similar to U.S. principals) via fax using the CD-ROM årsbok för skolan 01-02 (a CD-ROM with a complete database of Swedish rektors) provided by Lärarförbundet (Sweden's Teacher Union). Thirty-three rektors agreed to participate in the study. The surveys were sent to the rektors. The thirty-three rektors participating in the study gave their first through third grade general education classroom teachers the surveys. The teachers then sent the surveys directly back to the researchers.

The number of surveys/participants (400 in Wisconsin and 252 in Sweden) chosen was based on the assumption that given at least a 30% return rate, the participant set would still be large enough for adequate data analysis.

Results

Of the 400 questionnaires sent to classroom teachers in Wisconsin, 10 teachers indicated either by email or on the returned survey that they did not meet the criteria for the study (e.g., were now a principal, retired, teaching at a different grade level, etc.). Out of the 390 eligible surveys distributed in the United States, 157 teachers responded (40%) with surveys included in the data analysis. Of the 242 surveys disseminated to Swedish classroom teachers, 116 teachers (48%) responded with surveys included in the data analysis. Both samples of teachers were similar in their gender composition (predominately female), and the average number of students in their classes (U.S, $M=19.85$, $SD=4.73$, Sweden, $M=20.28$, $SD=5.74$). As expected, U.S. teachers typically taught one grade level whereas Swedish teachers typically taught three grades levels.

Rate of ADHD and Treatment with Stimulant Medication

The teachers were asked to indicate the number of students with ADHD and DAMP (Sweden) diagnoses and the number receiving stimulant medication. The mean number of children per classroom who were identified as having ADHD was 1.21 ($SD=1.33$) in the U.S. sample and .33 ($SD= .59$) in the Swedish sample. This represents 6.10% of the U.S. children and 1.63% of the Swedish children having a diagnosis of ADHD. An additional 1.04% of the Swedish children were identified as having DAMP so the combined total of DAMP and ADHD for the Swedish sample was 2.67%. Overall, 4.38% of the U.S. children were being treated with stimulant medication and .69% of the Swedish children were being treated with stimulants. Thus, 72% of the U.S. children diagnosed with ADHD received stimulant treatment while 26% of the diagnosed Swedish children received stimulants. Interestingly, 20.38% of the U.S. classrooms contained two or more students who were treated with stimulants as opposed to .17% of Swedish classrooms.

Causes of ADHD

Teachers were presented with a description of Christopher whose behaviors met the minimum diagnostic criteria for the DSM-IV-TR diagnosis of ADHD, Combined Type. The teacher's ratings are presented in Table 1. Ratings were on a six-point scale with a mean of 3.5 being in

the neutral range. Significant differences between U.S. and Swedish teachers are noted by asterisks in Table 1. Both U.S. and Swedish teachers tended to disagree ($m < 3$) that an active personality or immaturity could be the more likely cause of Christopher's ADHD behaviors (questions 3 & 7). They also tended to believe that Christopher did not learn ($m < 3$) to be the way he was (question 5). Conversely, the teachers tended to agree ($m > 4$) that behaviors like Christopher's could result from stress at home (question 2), and lack of basic academic skills (question 6). However, the U. S. teachers tended not to believe ($m < 3$) that the behaviors resulted from unclear classroom expectations (question 4) with Swedish teachers rating this question in the neutral range. U.S. teachers believed that incongruent classroom expectations (question 9) could cause Christopher's behaviors while Swedish teacher's ratings were in the neutral range.

Table 1
Possible Causes of ADHD: Ratings of U.S. and Swedish Teachers

Item	U.S. Teachers			Swedish Teachers		
			<u>D</u>			<u>D</u>
1. Children with Christopher's behaviors are probably born with a genetic predisposition towards hyperactivity and poor self-control.	57	.86	.36	16	.19	.41
2. Stress and conflict in the student's home life can cause behaviors like Christopher's.	57	.76	.17	16	.66	.31
3. Behaviors like Christopher's are more likely to be the result of an active personality rather than a disorder.	56	.87	.26	13	.53*	.21
4. Behaviors like Christopher's are often the result of unclear expectations in the classroom.	57	.45	.37	16	.15**	.58
5. Christopher has probably learned to be the way that he is.	57	.71	.30	15	.04**	.25
6. Lacking basic skills in an academic area (e.g., Christopher's lack of basic reading skills) often causes students to have difficulty paying attention.	57	.33	.35	16	.88**	.22
7. Christopher's behaviors are more likely the result of immaturity than an attentional disorder (ADHD or DAMP).	57	.71	.14	15	.77	.27
8. Behaviors like Christopher's can result from certain parenting methods, such as little positive reinforcement for good behavior and attention for bad behavior.	57	.90	.25	14	.24**	.41
9. Behaviors like Christopher's can result when classroom expectations are incongruent with the developmental abilities of	55	.04	.39	16	.48**	.46

the child.

Note. Teachers responses were assessed using a 6-point Likert scale. (1=Strongly Disagree, 2=Moderately Disagree, 3=Slightly Disagree, 4=Slightly Agree, 5=Moderately Agree, 6=Strongly Agree).

*p< .05; **p<.01.

Treatment of ADHD

Teacher's general attitudes about interventions for ADHD and their ratings of the specific *Medication*, *Behavioral*, and *Educational* interventions defined in the *Interventions Methods* section above are presented in Table 2. Again, significant differences between U.S. and Swedish teachers are noted by asterisks. Both U.S. teachers and Swedish teachers agreed that teachers should first try classroom interventions to improve *Christopher's* behavior before referring him to a doctor or for special education evaluation (questions 1 & 3). However, U.S. teacher's ratings for these questions were significantly higher than those of the Swedish teachers ($p < .01$). Swedish teachers did not believe that behavioral interventions would not work without concomitant treatment with medication (question 2).

The teachers were asked how effective they thought each specific intervention would be in improving *Christopher's disruptive hyperactive and impulsive behaviors* (question 4), *academic achievement in the long run* (question 5), and *attention in the classroom* (question 6). On all three questions, U.S. teachers rated medication and behavioral interventions as significantly more efficacious interventions for *Christopher* than Swedish teachers ($p < .05$). Swedish teachers did not believe that either medication or behavioral interventions were particularly effective interventions for children with ADHD. However, the Swedish teachers did rate educational interventions as being effective ($\bar{m} > 4$). U.S. teachers did not agree that behavioral interventions were likely to help *Christopher* but they did agree that medication would be an effective treatment for *Christopher's* behavior. However, they were less sure medication would necessarily help improve his academic achievement.

Table 2

Attitudes Related to Use of Stimulant Medication for Treatment of ADHD:
Ratings of U.S. and Swedish Teachers

Item	U.S. Teachers			Swedish Teachers		
			<u>D</u>			<u>D</u>
1. Rather than refer him to a doctor for these behaviors, Christopher's teacher should first find ways to try classroom interventions to	57	.10	.13	16	.97**	.33

improve Christopher's disruptive behavior.

2. Behavioral interventions with children like Christopher often will not work unless they are treated with stimulant medication first.	57	.76	.21	12	.08**	.35
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3. Christopher's teacher should try classroom interventions to improve his academic achievement before referring him for a special education evaluation.	57	.43	.79	14	.52**	.50
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4. How effective will each intervention be in improving Christopher's disruptive, hyperactive and impulsive classroom behaviors?

-Medication Intervention

53	.58	.98	12	.04**	.14
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-Behavioral Intervention

55	.19	.97	12	.83**	.92
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-Educational Intervention

55	.98	.78	13	.20*	.79
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5. How effective will each intervention be in improving Christopher's academic achievement in the long run?

-Medication Intervention

52	.34	.11	12	.74**	.11
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-Behavioral Intervention

54	.07	.04	14	.79*	.88
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-Educational Intervention

53	.99	.91	14	.21*	.83
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6. How effective will each intervention be in improving Christopher's attention in the classroom?

-Medication Intervention

52	.67	.95	12	.12**	.03
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-Behavioral Intervention

55	.17	.95	14	.90*	.01
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-Educational Intervention

55	.77	.87	14	.01*	.84
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Note. Teachers responses were assessed using a 6-point Likert scale for questions 1-3. (1=Strongly Disagree, 2=Moderately Disagree, 3=Slightly Disagree, 4=Slightly Agree, 5=Moderately Agree, 6=Strongly Agree).

Note. Teacher responses were assessed using a 5-point Likert scale for questions 4-6. The following scales were used: Q1, Q2, and Q3 (1-Not at all effective to 3-Moderately Effective to 5-Very Effective), Q4 (1-No risks are likely to 3-Some risks likely to 5-Lots of risks are likely), Q5 (1-Very negative to 3-Neutral to 5-Very positive). Levels of significance from the T-tests comparing U.S. teachers to Swedish teachers are only reported in the Swedish Teacher column to eliminate unnecessary duplication.*p< .05; **p<.01.

Attitudes related to Stimulants

Teacher's attitudes related to the use of stimulant medication for treatment of ADHD are presented in Table 3 (asterisks denote significant differences). In most cases, Swedish teachers disagreed ($\bar{m} < 3$) with statements that suggested stimulant medication was a necessary and appropriate way of treating behaviors associated with ADHD (*questions 1, 3, 4, 6, 7*). They were in particular disagreement ($\bar{m} < 2$) with the statement that it would be a disservice not to treat children who have ADHD with stimulant medication (question 7). U.S. teachers rated stimulant medication significantly higher than Swedish teachers on all of these questions ($p < .05$).

Table 3
Possible Interventions for Treatment of ADHD: Rating of U.S. and Swedish Teachers

Item	U.S. Teachers			Swedish Teachers		
			<u>D</u>			<u>D</u>
1. If children like Christopher do not receive stimulant treatment to treat their hyperactivity, impulsivity, and inattention, they will probably be worse off in the long run.	57	.65	.33	15	.58**	.52
2. Christopher may benefit from a trial dosage of stimulant medication.	56	.35	.23	16	.14**	.67
3. If his behavior markedly improves after taking the stimulant medication, it would seem to indicate that he has an attentional disorder (ADHD or DAMP).	55	.27	.21	14	.78**	.65
4. Stimulant medication is a safe way to improve behaviors like Christopher's.	53	.60	.29	15	.27**	.36
5. Too many U.S. children, like Christopher, receive stimulant medication.	57	.06	.37	8	.96	.44
6. Before his behavior can be improved, Christopher needs to be evaluated by a pediatrician or child psychiatrist, so he can be treated with stimulant medication.	55	.20	.61	15	.18**	.31
7. It is a disservice to children with behaviors like Christopher's when they do not receive stimulant medication.	56	.31	.46	15	.57**	.04
8. There are many more children like Christopher who are in need of stimulant treatment for their behaviors but do not presently receive it.	56	.29	.34	14	.53	.63

Note. Teachers responses were assessed using a 6-point Likert scale. (1=Strongly Disagree, 2=Moderately Disagree, 3=Slightly Disagree, 4=Slightly Agree, 5=Moderately Agree, 6=Strongly Agree).

* $p < .05$; ** $p < .01$.

Discussion

Rate of ADHD and Treatment with Stimulant Medication

Swedish general education classrooms have fewer students diagnosed with ADHD and fewer students treated with stimulants than U.S. classrooms. The percentages reported by the U.S. and Swedish teachers in this study are similar to those reported in recent studies in the U.S. and Sweden (Doherty, Frankenberger, Fuhrer, & Snider, 2000; Zito, Safer, dosReis, Gardener, Boles, & Lynch, 2000; Basen, 2000). The rate of ADHD reported by the U.S. teachers was 228% (6.10% vs. 2.67%) percent higher than the combined rate of ADHD and DAMP reported by the Swedish teachers. Furthermore, the rate of stimulant treatment reported by the U.S. teachers was 635% (4.38% vs. .69%) higher than the rate reported by the Swedish teachers. It is important to note that the U.S. reported rate may be an underestimate since in the United States, teachers often do not know when students are taking medications (Musser, Ahmann, Theye, Mundt, Broste, and Mueller-Rizner, 1998).

Furthermore, based on the results of this study, the percentage of U.S. general education classrooms where at least one student was being treated with stimulants was nearly 500% higher (56.05% vs. 11.30%) than in Sweden. The U.S. percentage of classrooms with multiple students (two or more) receiving stimulants was over 750% higher (20.38% vs. 1.74%) than the percentage of Swedish general education classrooms with multiple stimulant-treated students. Finally, over 870% more (7.50% vs. 0.87%) general education classrooms in the U.S. than in Sweden had three or more students being treated with stimulants.

Causes of ADHD

Researchers have determined that in the U.S., teachers and other professionals believe ADHD is a neuro-biological disorder that may have a genetic basis (Frankenberger, et al., 2001, Snider et al., 2003). This view is held even though persuasive evidence supporting an identifiable neuro-biological cause is lacking (Leo & Cohen, 2003; NIH Consensus Report, 1998). In the current study, teachers from both countries believed that ADHD was a result of a genetic predisposition. Neither group believed that children with behaviors associated with ADHD learned to be the way they were, but they agreed that environmental factors could influence and exacerbate behaviors associated with ADHD. For example, they believed that stress and conflict in the child's home as well as the lacking of basic academic skills could play significant roles in causing ADHD behaviors.

One interpretation of this ambivalence related to causes may be that teachers in both countries view ADHD as a genetic condition when it is already diagnosed and called a disorder. However, when only specific behaviors associated with ADHD are described, teachers may believe the behavior could be environmentally caused. Another explanation may be that the above interpretation is descriptive for U.S. teachers but may not be for Swedish teachers. The children diagnosed with ADHD Swedish teachers encounter may display more severe symptoms than those commonly diagnosed in the U.S., because the proportion of diagnosed children in Sweden

is much smaller. Therefore, the Swedish teachers may view children with ADHD as having a more severe disorder that probably results from neurobiological causes.

Treatment of ADHD

U.S. teachers strongly believed that behavioral and educational interventions should be attempted before treatment with medication is initiated. They expressed this belief even though past research indicated such pre-referral interventions were infrequently employed in practice (Weber et al., 1992). Swedish teachers were more neutral in response to the pre-referral interventions.

With regard to the effectiveness of non-pharmaceutical interventions, U.S. teachers had a more positive reaction and predicted that the behavioral intervention would be a more effective treatment than Swedish teachers. However, Swedish teachers believed that the effectiveness of behavioral interventions would not be diminished without concomitant treatment with medication. Swedish teachers rated the educational intervention as being the most effective and this intervention was also the most highly rated by the U.S. teachers. Teachers' faith in educational interventions are supported by recent research (Sinha, 2005).

Attitudes related to Stimulants

With regard to interventions, the most noticeable difference between teachers from the two countries involved the use of stimulant medication. Possibly reflecting less public and cultural acceptance of stimulants (Gillberg, 1997), the Swedish teachers viewed stimulant medication less positively and showed more skepticism and wariness about the safety of using stimulant medication to treat children. Likely related to this attitude, Swedish teachers were more likely to prefer an intervention package without the use of stimulants. Conversely, U.S. teachers appeared more confident about the positive effects of stimulant medication on students' disruptive, hyperactive and impulsive behaviors, academic achievement and attention. Both groups of teachers, especially Swedish teachers, believed that stimulant medication would be less effective for improving academic achievement in the long run than it would be in improving other ADHD symptoms. The U.S. teachers in this study, as well as in previous studies (Snider et al., 2003), held to the misconception that the diagnosis of ADHD could be confirmed if the child's behavior improves as a result of taking stimulant medication. Swedish teachers correctly believed that this was not the case. Research has shown that stimulant medication improves behavior, attention, and concentration for children without ADHD in the same way that it does for children with ADHD (Peloquin & Klorman, 1986).

Implications

One implication of this study is that teachers in both countries could benefit from exposure to broader research related to ADHD diagnosis. Although both the U.S. and Swedish teachers believed that ADHD related behaviors could be caused by both genetic and environmental factors, they clearly believed that ADHD was a valid diagnosis. ADHD often gets explained to teachers as an inarguably valid diagnosis that is purely a genetic, neurobiological or neuropsychiatric disorder in which stimulant medication corrects ADHD behaviors like glasses correct vision problems (CHADD, 2001). These suppositions are reinforced by the imaging studies that are widely disseminated as supplying indisputable evidence that ADHD is a condition of the brain, and that a definitive medical test is just around the corner. In fact, the promise of a definitive medical test can be tracked back as far as Zametkin, et al. (1990) and

further espoused by Barkley (1998) where he predicted such a test within the next five years. However, Leo and Cohen (2003) completed a recent review of the imaging research and concluded that such a definitive diagnostic test is still an unfulfilled promise.

A second implication is related to treatment of ADHD. U.S. teachers evinced conflicting attitudes related to the treatment of ADHD. They believed that pre-referral interventions should be attempted before a child is referred for an ADHD diagnosis but they also had a positive view of the impact stimulant medication had on improving classroom behavior and attention. Interestingly, they did not have the same positive attitudes about the efficacy of behavioral interventions, even though well-designed behavioral interventions may be as effective as medication (Pelham et al., 2000; Barry & Messer, 2003). Perhaps these attitudes about behavioral interventions reflect reality in the typical school setting, where medication is relatively easy to utilize while personnel having the knowledge and experience necessary to develop behavioral programs with the fidelity needed to be effective are not readily available.

Therefore, if behavioral interventions are to live up to their potential in U.S. schools, teachers need to be better informed about the risks related to the large scale use of stimulant medications (Brandon, Marinelli, Baker & White, 2001; Brandon & Steiner 2003; Bolanos, Barrot, Berton, Wallace-Black & Nestler, 2003; Carlezon, Mague & Andersen, 2003; Chase, Brown, Carry & Wilkinson, 2003; Moline & Frankenberger, 2001; MTA, 2004; Warden, Robling, Sanders, Blizotes, & Turner, 2005; Garland, 2004; Wilkinson, Taylor, & Holt, 2002). They will also need to be educated about the effectiveness of well-designed behavioral programs and have access to school professionals with the training and experience necessary to develop such programs in the school setting. Iowa represents a state model where teachers receive training in the use of effective behavioral interventions and school psychologists occupy the role of behavior program designers (Reschly, Tilly & Grimes 1999).

The Swedish teachers clearly preferred educational to medical interventions for treatment of ADHD related symptoms. However, Swedish teachers did not believe that behavioral interventions represented an effective method for treating children with ADHD types of behaviors. Therefore, Swedish teachers could benefit from further information related to the success of well-designed behavioral interventions for treatment of ADHD (Barry & Messer, 2003). In addition, even in the presence of increased knowledge of efficacy of behavioral treatment, Swedish schools would need to provide the needed personnel with knowledge and experience in the use of behavioral interventions in school settings. This is the same challenge facing schools in the U.S. that was delineated above.

Finally, stimulant treatment growth in Sweden may not emulate the dramatic increase in stimulant use in the United States. Although there are forces attempting to move Sweden towards a more liberalized view of stimulant treatment, only a small percentage of children in general education classrooms are currently being given stimulant medications to treat ADHD (Larsson, 2002). Gillberg (1997) stated that Sweden needs to soften what the author called Sweden's rigid view of stimulants to treat ADHD and DAMP. However, even stimulant proponents in Sweden advise that stimulant treatment be reserved for severe cases of ADHD and DAMP (Gillberg, 1997).

References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed. text revision). Washington, DC: Author.
- Barkley, R.A. (1998, Sept.). Attention deficit hyperactivity disorder. *Scientific American*.
- Barry, L.M. & Messer, J.J. (2003). A practical application of self-management for students diagnosed with attention-deficit/hyperactivity disorder. *Journal of Positive Behavior Interventions*, 5, 238-248.
- Bäsen, A. (2000, October 10). *Dagens Medicin*, 41.
- Bolanos, C.A., Barrot, M., Berton, O., Wallace-Black, D., Nestler, E.J. (2003). Methylphenidate treatment during pre-and periadolescence alters behavioral responses to emotional stimuli at adulthood. *Biological Psychiatry*, 54(12), 1317-1329.
- Brandon, C.L., Marinelli, M., Baker, L.K., White, F.J. (2001). Enhanced reactivity and vulnerability to cocaine following methylphenidate treatment in adolescent rats. *Neuropsychopharmacology*, 25(5), 651-661.
- Brandon, C., & Steiner, H. (2003). Repeated methylphenidate treatment in adolescent rats alters gene regulation in the striatum. *European Journal of Neuroscience*, 18(6):1584.
- Carlezon, W.A.jr., Mague, S.D., Andersen, S.L. (2003). Enduring behavioral effects of early exposure to methylphenidate in rats. *Biological Psychiatry*, 54(12), 1330-1337.
- Carlson, S. (2003). *International perspectives regarding ADHD and stimulant treatment: U.S. and Swedish teacher samples*. Unpublished master's thesis, University of Wisconsin-Eau Claire.
- Chase, T., Brown, R., Carrey, N., & Wilkinson, M. Daily methylphenidate administration attenuates c-fos expression in the striatum of prepubertal rats. *Neuroreport*. 2003; 14(5): 769-772.
- Doherty, S., Frankenberger, W., Fuhrer, R., & Snider, V. (2000). Children's self reported effects of stimulant medication. *International Journal of Disability, Development and Education*, 47, 39-54.
- Frankenberger, W., Farmer, C., Parker, L., & Cermak, J. (2001). The use of stimulant medication for treatment of attention-deficit/hyperactivity disorder: A national survey of school psychologists' knowledge, attitudes, and experience. *Developmental Disabilities Bulletin*, 29, 132-151.
- Frankenberger, W., Lozar, B., & Dallas, P. (1990). The use of stimulant medication to treat attention deficit hyperactive disorder (ADHD) in elementary school children. *Developmental Disabilities Bulletin*, 18, 1-13.
- Garland, E. J. (2004). Facing the evidence: antidepressant treatment in children and adolescents. *CMAJ*, 170, (4). Retrieved Jan. 14, 2005 from www.cmaj.ca/cgi/content/full/170/4/
- Gillberg, C. (1997). Central nervous system stimulants to hyperactive children? Time to soften up the attitude towards an efficient treatment. *Lakartidningen*, 94 (23), 2161-2162.
- Jerome, L., Gordon, M.G., & Hustler, P. (1994). A comparison of U.S. and Canadian teachers' knowledge and attitudes towards attention-deficit hyperactivity disorder (ADHD). *Canadian Journal of Psychiatry*, 39, 563-567.
- Landgren, M., Kjellmen, B., & Gillberg, C. (1998). Attention deficit disorder with developmental coordination disorders. *Archives of Disease in Childhood*, 79, 207-212.
- Larsson, J. (2002, January 13). Letter to International Narcotics Control Board (INCB): the use of

- central stimulants for medical purposes in Sweden. Hassela Nordic Network, Retrieved July 17, 2003, from <http://www.hnnnsweden.com/0002/01jan2002/02jan-005.htm>.
- LeFever, G. Dawson, K., & Morrow, A. (1999). The extent of drug therapy for attention deficit hyperactivity disorder among children in public schools. *U.S. Journal of Public Health*, 89, 1359-1364.
- Leo, J., & Cohen, D. (2003). Broken brains or flawed studies? A critical review of ADHD neuroimaging research. *The Journal of Mind and Behavior*, 24(1), 29-56.
- Liu, C., Robin, A. L., Brenner, S., & Eastman, J. (2004). Social acceptability of methylphenidate and behavior modifications for treating attention deficit hyperactivity disorder. *Pediatrics*, 88, 560-565.
- Medical Products Agency (2003). Retrieved December 5, 2003, from <http://www.mpa.se/eng/index.shtml>
- Moline, S. & Frankenberger, W. (2001). Use of stimulant medication for treatment of attention-deficit/hyperactivity disorder: A survey of middle and high school students' attitudes. *Psychology in the Schools*, 38, 569-584.
- MTA Cooperative Group (2004). National institute of mental health multimodal treatment study of ADHD follow up: Changes in effectiveness and growth after the end of treatment. *Pediatrics*, 113, 762-770.
- Multimodal Treatment Study of Children with ADHD Cooperative Group. (1999). A 14-month randomized clinical trial of treatment strategies for attention-deficit/hyperactivity disorder. *Archives of General Psychiatry*, 56, 1088-1096.
- Musser, C., Ahmann, P., Theye, F., Mundt, P., Broste, S., Mueller-Rizner, N. (1998). Stimulant use and the potential for abuse in Wisconsin as reported by school administrators and longitudinally followed children. *Developmental and Behavioral Pediatrics*, 19 (3), 187-192.
- National Institutes of Health. (1998). NIH consensus report. *Diagnosis and treatment of attention deficit hyperactivity disorder*. Nov. 16-18. 16, 1-37.
- Pelham, W.E., Gnagy, E.M., Greiner, A.R., Hoza, B., Hinshaw, S.P., Swanson, J.M., et.al. (2000). Behavioral versus behavioral and pharmacological treatment in ADHD children attending a summer treatment program. *Journal of Abnormal Child Psychology*, 28(6), 507-525.
- Peloquin, L. & Korman, R. (1986). Effects of methylphenidate on normal children's mood, event-related potentials, and performance in memory scanning and vigilance. *Journal of Abnormal Psychology*, 95(1), 88-98.
- Reschly, D.K., Tilly, W.D., III & Grimes, J.P. (1999). *Special education in transition: Functional assessment and noncategorical programming*. Longmont, CO: Sopris West.
- Rowland, A.S., Umbach, D.M., Stallone, L., Naftel, A.J., Bohlig, E.M., & Sandler, D.P. (2002). Prevalence of medication treatment for attention deficit-hyperactivity disorder among elementary school children in Johnston County, North Carolina. *American Journal of Public Health*, 92(2), 231-234.
- Sinha, G. (2005). Training the brain: Cognitive therapy as an alternative to ADHD drugs. *Scientific American*, 293, 22-24.
- Snider, V., Busch, T., & Arrowood, L. (2003). Teacher knowledge of stimulant medication and ADHD. *Remedial and Special Education*, 24(1), 46-56.
- U.S. Pharmacist Continuing Education. (2000). Attention-deficit hyperactivity disorder and the rise in methylphenidate use (ACPE Program No. 430-000-00-054-H01). [On-line continuing education course].

- Warden, S. J., Robling, A. G., Sanders, M. S., Bliziotis, M. M., & Turner, C. H. (2005).
Inhibition of the serotonin transporter (5-HTT) reduces bone accrual during growth.
Endocrinology, 146, 685-693.
- Weber, K., Frankenberger, W. & Heilman, K (1992). The effects of Ritalin on the academic
achievement of children diagnosed with attention-deficit hyperactivity disorder.
Developmental Disability Bulletin, 20(2), 49-68.
- Wilkinson, G. B., Taylor, P., & Holt, J. R. (2002). Bipolar disorder in adolescence: Diagnosis
and treatment. *Journal of Mental Health Counseling*, 24, 348-358.
- Zametkin, A.J., Nordahl, T.E., Gross, M., King, A.C., Semple, W.E., Rumsey, et al. (1990).
Cerebral glucose metabolism in adults with hyperactivity of childhood onset. *New
England Journal of Medicine*, 323(20), 1361-1367.
- Zito, .M., Safer, D.J., dosReis, S., Gardener, J.F., Boles, M., & Lynch, F. (2000). Trends in
prescribing of psychotropic medications to preschoolers. *Journal of the American
Medical Association*, 283, 1025-1030.
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