

Summary of Research Related to Common BD Program Components

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Academic Interventions Summary of Findings

General Findings:

- When teachers implement academic instructional practices with students with or at risk for EBD students often do demonstrate academic and behavioral success.
- Early intervention has lead to mixed academic success.
- Research regarding academic interventions for students with EBD has focused on the content areas of reading, writing, mathematics and in limited number of cases social studies concepts.
- Although overall the descriptions of students were incomplete, for studies reporting student demographics the majority of research regarding academic interventions for students with EBD has included student populations that were predominantly male, predominantly African American, and predominantly elementary.
- Dependent academic variables for studies have included informal measures of: on-task or engaged time, academic participation, academic accuracy, oral reading fluency, digits correct per minute, correct words per minute, and problems answered per session. The majority of the studies regarding literacy outcomes have included standardized measures such as CBM, TOPPA, DIBLES, SSRS, SARS, etc.

Research Findings which are Effective:

- Academic interventions including 1) peer tutoring, 2) phonological awareness, 3) academic strategy training, 4) time delay, 5) self-monitoring, 6) increasing opportunities to respond, and 7) praise/positive performance feedback have evidence of positive academic outcomes for students with or at-risk for EBD.
- Many of the studies with positive outcomes were conducted in self-contained settings.
- A number of the interventions had to be highly individualized in order to be implemented.
- As such findings should be considered within this context.

Research Findings which are Promising:

- Academic interventions including 1) story mapping, 2) musical mnemonics, and 3) a curriculum tied to financial gain have limited but promising evidence of positive academic outcomes for students with or at risk for EBD.

Research Findings with Limited or No Effectiveness:

- Academic interventions including instructional or assistive technology were not found when doing hand and database searches for this review.

Program/Policy Statements:

IDEA 2004:

- Disproportionate identification by ethnicity is a concern
- Proven, scientifically-based methods should be utilized

Kauffman & Wong, (1991); Lane (2004); Lewis, Hudson, Richter & Johnson (2004); and Sutherland (2000):

- Improved academic outcomes is often associated with improved social and behavioral performance
- Individual characteristics and demographics should be considered
- The significant amount of literature describing the characteristics of effective teachers of students with EBD are extrapolations of findings from regular classroom research
- Developing a resource base of effective practices for teachers of students with or at risk for EBD will require extraordinary creativity and persistence
- A resource base of effective practices does not automatically result in more effective teachers
- Bridging the research to practice gap will require systematic changes in pre-service and in-service professional development

Summary of Behavior Strategies

- Instructional task modification begins with the process of analyzing the effectiveness and appropriateness of how skills are taught. Teacher training of good strategies is necessary for effective classroom management.
- Instruction that embeds practice, feedback, and incentives has shown a reduction in off-task behaviors. Specifically, prompt-correction feedback increased academics and decreased problem behaviors (Warman & Walberg, 1991).
- More difficult tasks result in higher levels of problem behaviors (Center, Deitz, & Kauffman, 1982; Weeks & Gaylord-Ross, 1981; De Paepe, Shores, Jack & Denny, 1996). Various studies have connected a decrease in problem behaviors with modifying task difficulty and level of demands associated with the task. A greater amount of work is completed and more time is spent on-task when activities are presented at a level of 90% accuracy when completed independently (Gilbertson, Witt, Dufrene, & Duhon, in press).
- Alterations can be made to task requirements, such as, how to complete the task, allowing frequent breaks from the task, and breaking tasks down into shorter segments: Dunlap (1994) altered tasks to include choice, as choice itself has been shown to be reinforcing; Problem behaviors were shown to be decreased when systematically embedding high probability tasks with low probability tasks (Horner, Day, Sprague, O'Brien, &

Heathfield, 1991); Blair, Umbriet & Bos (1991) used student preference of tasks to decrease problem behaviors.

- Curriculum Based Assessments are an effective way to determine appropriate academic placement and to evaluate the effectiveness of instructional strategies being used (Shinn, 1998).
- Students are more likely to complete tasks when contingency reinforcement is used (Mace & Roberts, 1974). Ayllon & Roberts (1974) used token reinforcement contingent with performance of academic tasks. The result was an increase in academic performance and a decrease in problem behaviors.
- Active student responding is a research supported strategy for decreasing problem behaviors and increasing on-task frequency (Brophy, 1986; Gettinger & Stoiber, 1999; Greenwood, 1996).
- Teaching clearly defined expectations reduces problem behaviors. More specifically, the use of praise, pre-corrects, precision-commands, over-correction and response cost (Colvin, 1997; Rhode, Jenson & Reavis, 1998; Gresham & Gresham, 1982; Carey & Bucher, 1983; Kelley & McCain, 1995; Proctor & Morgan, 1991; Wilt & Elliot, 1982; Musser, Bray, Kehle, & Jenson, 2001).
- Function-based interventions decreased problem behaviors (Iwata, Vollmer, Zarcone, & Rodgers, 1993; Fisher, Lindauer, Alterson, & Thompson, 1998; Noell, VanDerHeyden, Gatti, & Whitmarch, 2001).

Social Skills Summary of Findings

General Findings:

- Social skills training should be embedded into general education as well as special education curriculum
- Early prevention through screening can identify students at-risk for problem behaviors and can be effective in more accurately identifying social skills in need of remediation
- Social skills training has yielded mixed results, in part due to the relative newness of many programs and the lack of using uniform procedures to accurately match interventions to presenting problems

Research Findings which are Effective:

- Teachers across elementary and secondary levels for both general and special education rate items associated with finishing assignments on time, following directions, controlling temper, ignoring peer distractions, and attends to teacher directions.
- Targeted social skills interventions should be (1) closely matched to accurately identified deficits, (2) of sufficient frequency and duration, and (3) structured to include generalization across appropriate settings
- Social skills interventions that include a pull-out component should be reinforced in the classroom setting(s)
- FBAs should include documentation of setting events, antecedents, behaviors, and consequences; and BIPs should include consideration of the FBA findings

Research Findings which are Promising:

- Training paraprofessionals to implement social skills training and BIPs
- Use of school-wide social skills expectations to lower probability of inappropriate behaviors from students identified as at-risk and/or E/BD
- Transition training for students identified as at-risk, E/BD, and or JO that includes specific social skills training associated with expectations in job-related settings
- Increasing social acceptance by peers through training students to use positive comments to gain peer attention

Research Findings with Limited or No Effectiveness:

- Pull out social skills training that does not include generalization and/or maintenance
- Interventions that are either too complicated or time-consuming for typical school staff to maintain
- Trainings of short duration

Summary of MH Related Service Research:

- Much of the research that is labeled as school-based mental health is on programs to increase social skills or to decrease noncompliant or aggressive behavior.
- Many studies are targeted toward the prevention of mental health concerns.
- Minimal literature describes school-based mental health services as being provided as related services under IDEA. Music therapy was really the only service that was actually identified in that way.
- The current push is for systems of care, which include schools.
- Wraparound services should be individualized and include functional behavior assessment.
- Although many authors suggest the importance of including families in intervention programs within schools, limited research data is available.
- Programs that target students who are at-risk for a diagnosis of depression have been successful at reducing symptoms with maintenance at follow-up.
- Specific programs that have shown success with students with EBD include: Life Space Crisis Intervention, Parent-Child Interaction Therapy, Multi-systemic Treatment, and The Incredible Years Parent, Teacher, and Child Trainings, among others.
- There are music therapy programs for students with EBD (limited data).
- Coordination with community agencies, which have different organizational structures, missions, and policies, is vital. School-based case managers can help with this.
- Age has been a discriminating factor in restrictiveness of placement, with younger youth having fewer residential placements. Students in special education classrooms had the highest rate of family mental illness, whereas students in corrections had the lowest rate. Juvenile justice involvement discriminated between students in corrections placements and students on public school campuses. Caucasian youths were educated in residential

and correctional settings at a far lower rate compared to general, special or self-contained educational environments.

- No studies were found regarding psychological assessment of students as a school component of services for students with EBD.
- Although the systems of care articles indicate there should be coordination between schools and outside therapists, no studies were found regarding consultation with psychotherapists.
- Limited information was found on school performance related to the use of medications.

*I am not sure of other glaring omissions, other than to mention that this is a huge area and I am concerned that I may not have addressed everything.

*I am confident in the research on programs such as The Incredible Years and Multi-systemic Treatment. Many others have not had enough replication research done.

Summary of Program and Policy Statements:

- Most mental health services for children occur in the schools, yet little is known about their effectiveness or even their makeup.
- Services for those classified as SED are often provided in separate systems and are uncoordinated and redundant.
- School-based mental health services should be based on three tiers: preventive services; targeted mental health services/early intervention, to include training for teachers in early identification of mental health concerns; and services for children with severe mental health needs (systems of care) through a multi-disciplinary team approach.
- There are three delivery models: school supported mental health model-a separate mental health unit is housed by the school system; community connections model-contracted services within the school or after school by community mental health personnel; and an integrated model-prevention, screening, referral, special education, family services in the school.
- Essential elements of wraparound have been identified: community-based, individualized and strength-based, culturally competent, family partners, interagency team-driven, flexible approaches and funding, and formal and informal resources.
- Schools can contribute greatly to the system of care approach as a center of comprehensive services. A range of services should include intensive outpatient care, community-based residential treatment, and inpatient services. Newer versions include school-based day treatment programs.
- Social workers, school counselors, and school psychologists can participate in programming for children with EBD (assessment, consultation and collaboration with teachers, administrators, paraprofessionals, and parents, completing FBA/BIPs, providing training, monitoring plans, and modeling strategies for staff). This may be a more cost-effective partnership than to seek community supports.
- Mental health services for very young children include parent education and training and therapeutic preschool.

Program/Policy Statements:

IDEA 2004:

- Accountability should be assessed through educational and functional outcomes, including acquisition of appropriate social and adaptive skills
- Disproportionate identification by ethnicity is a concern
- Students at-risk of placement in special education or from disadvantaged backgrounds may be eligible for assistance through IDEA funds
- Proven, scientifically-based methods should be utilized (PBS?)
- RTI consideration (social skills concerns associated with LD and E/BD)

OSEP:

- Lists PBS Site as the link under new OSEP Toolkit on Teaching and Assessing Students with Disabilities, Behavior section.

Gresham (1998); Gresham, Sugai, & Horner (2001); Gresham, Cook, Crews, & Kern (2004); Kavale, Mathur, & Mostert (2004):

- Social skills training is a relatively new and evolving methodology
- Small outcomes should be taken in context of above, as well as confusion of how to structure and standardize key elements
- Small effect sizes can still be significant
- Construct of social skills can be divided into 3 categories: social interaction, prosocial behavior, and social-cognitive skills
- Individual characteristics and demographics should be considered
- Social skills training should be rebuilt rather than razed or remodeled

Summary of Other Related Services Research

Research

Occupational Therapy/Physical Therapy

- Sensory integration (SI) is utilized in schools by physical therapists and occupational therapists with limited empirical support
- SI interventions include weighted vests, sensory de-sensitization, Alert program
- Majority of SI intervention studies suffer from poor research design and control
- Qualitative studies support the use of SI by therapists and parents
- One study with the use of therapy balls as chairs increased in-seat behavior and word production

Speech-language Pathology (SLP)

- Speech-language therapy interventions generated generally positive outcomes, especially for prevention of behavior problems in preschooler at-risk
- Interventions with empirical support include peer play, parent-implemented, and group speech therapy
- Empirical studies utilizing SI by speech-language pathologists demonstrated inconsistent outcomes, poor research design
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Program Policies/Literature Reviews

Occupational Therapy/Physical Therapy

- The American Occupational Therapy (AOTA) acknowledges lack of rigorous empirical support for SI, but their position statement is that it is acceptable to utilize theory of SI as a “frame of reference” for occupational therapy intervention

Speech-language Pathology (SLP)

- Parent-implemented programs were recommended
- Literature review indicated SI had inconsistent outcomes and poor research design
- Recommend SLP collaborate with colleagues in implemented PBS

School Health Services/Therapeutic Recreation

- only one article found on each of these related services with limited effectiveness
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Recommendations

There is very little empirical research on related services with children with EBD. The strongest research support is in speech-language pathology in the area of prevention of EBD in at-risk preschoolers. The fields of physical therapy, occupational therapy and speech therapy are in consensus that there is a paucity of empirical research to support the use of SI as an intervention. It is imperative that related services bridge the research to practice gap. Techniques such as SI that do not have empirical support should not be utilized as an intervention.

The research to date with children with EBD in the related services suffers from limited data, limited subjects and a general lack of rigorous experimental control.