

FREDDA BROWN, PH.D.
EDUCATIONAL AND BEHAVIORAL CONSULTANT

CONSULTATION REPORT: XXXXXXXXXXXXXXXXXXXX

November 23, 1999

PURPOSE AND BACKGROUND OF CONSULTATION

The purpose of my consultation and this report is to review and analyze the educational and behavior management plans and methods that have been designed and implemented for XXXXXXXXXXXXXXXXXXXX.

I am a Professor of Special Education, with 25 years of experience working with individuals with significant disabilities, including severe behavior problems and severe intellectual disabilities. I have published numerous articles in refereed journals, chapters and three books in the areas of behavior management and curriculum; serve as associate editor of two major refereed journals in the field (*Journal of Positive Behavioral Interventions* and *Journal of the Association for Persons with Severe Handicaps*); am on the editorial board of 3 other refereed journals; consult with families; and speak at conferences and seminars across the country.

This report is based on a one-hour observation of XXXXXXXX on November 8, 1999; a comprehensive review of a variety of reports from the Board of Cooperative Educational Services Division of Special Education (e.g., Psychological Evaluations, Behavioral Progress Summaries, Behavioral Intervention Plans, Individual Service Plan, Related Service Evaluations, Annual Reviews); a variety of reports related to her program at the Judge Rotenberg Center (JRC) (e.g., the Proposed Behavior Modification Treatment Plan, Behavioral Program Evaluation of June 14, 1999, Dr. xxxxx's report of June 10, 1999; Individualized Education Plan); an interview with Dr. xxxxxx, Ms. xxxxx (case manager), and Ms. xxxxxx (case manager). In addition, this consultant voluntarily received a shock which was administered by Dr. xxxxxx. This action was taken to understand more objectively the program that XXXXXXXX has experienced.

This report will be organized into two main sections. The first section will address XXXXXXXX's Behavior Program Plan, and discuss its development and implementation. The second section will discuss the educational program developed for XXXXXXXX.

In general, the report reflects this consultant's professional judgement that the extraordinary means of behavior suppression (e.g., contingent electric shock, water spray) that are used with XXXXXXXX are not appropriate or justified. These extraordinary measures are used in the absence of what is now considered standard practices of effective behavior support. While there are many components referred to as "positive reinforcement" written in XXXXXXXX's program, these appear to be perfunctory. "Taking away food, possessions,

privileges, or rights just so that these can be given back in return for good behavior, and then taken away again to punish bad behavior, subverts the principle of positive reinforcement” (Sidman, 1989, p. 221). Further, current standard educational practices have not been implemented. Because of the direct relationship between an educational environment (e.g., curriculum, materials, instructional strategies) and problem behavior, it is critical that this be considered as well. It is this consultant’s professional judgement that Xxxxxxxx’s behavioral and educational program are not preparing her for less restrictive environments, thus ensuring her stay in the most restrictive setting (JRC). It is apparent from the records reviewed and this consultant’s observation that what is being taught to Xxxxxxxx is not preparing her to engage in the skills necessary to function in natural environments or in an adult world outside of JRC. That is, even if Xxxxxxxx were to emit little or no problem behaviors, she would be left without a behavioral repertoire to assist her to live a life in which she may meaningfully participate in less restrictive environments or the social world of individuals with less significant disabilities or with no disabilities.

I: Behavior Program Plan

In a sense, applied behavior analysis underwent a revolution in the 1980s. It moved from behavioral treatments based largely on the manipulation of consequences (i.e., use of reinforcers to increase behaviors, and punishers to reduce problem behaviors), to a new wave of thinking that examined the environmental etiology of the behaviors as the driving force behind the selection of treatment procedures (Mace & Roberts, 1993).

This move away from manipulation of consequences, especially punishment, is evident in the literature across the field of psychology and special education. Dr. Murray Sidman, scientist and author of the classic book Tactics of Scientific Research, a book that is considered the “bible” of behavior analysis, published another book in 1989 called Coercion and its Fallout. In his forward, Dr. Sidman explains, “I wrote this book to say some things I have long thought needed saying not just to professional colleagues but to all thoughtful people who are concerned about where we are going as a species” (p. vi). In this book Dr. Sidman defines coercion as the “use of punishment and the threat of punishment to get others to act as we would like” (p.1). Dr. Sidman describes the effects of such procedures:

“With the addition of every new punishing element to our environment, however, our lives become potentially less satisfying, more desperate. If we encounter punishment frequently, we learn that our safest course is to stand pat and do as little as possible. We congratulate ourselves for every day that passes without catastrophe. The only things we are eager to learn are new ways to evade or to destroy objects and people that stand in our way. The process is potentially explosive. Whenever we are punished, more and more elements of our environment become negative reinforcers and punishers. We come more and

more under coercive control, and we rely more and more on counter coercion to keep ourselves afloat.” (p. 78).

There are many side effects of punishment. The side effects of punishment often have considerably greater behavioral significance than the hoped-for main effects of suppression of behavior, yet punishment and other forms of coercion have continued to be used without adequate testing (Sidman, 1989). The environment where punishment occurs becomes punishing in and of itself; thus school becomes a place of punishment, and not an environment for learning, growth or nurturance. Further, the people who implement the punishment become conditioned punishers themselves, eliciting the same reactions as does the actual punishment. Thus, teachers and staff represent punishment, not education. Although punishment does “seem to do the job,” the problems and emotional suffering that result later take great amounts of effort and money to resolve, and these side effects must be counted as costs (Sidman, 1989).

A major outcome of this change in focus in applied behavior analysis is that the intervention for the disruptive behavior of one student might look completely different than the intervention developed for the topographically similar disruptive behavior of another student. Further, this means that without information related to the environmental etiology of the behavior, an effective strategy is not likely to be developed. *Positive behavioral support*, is a comprehensive empirically derived behavioral technology with an emphasis on understanding the problem behavior and building skills and capacity in the individual to more meaningfully and competently participate in inclusive, natural, community-based settings. The use of Positive Behavioral Supports has been articulated in the Individuals with Disabilities Education Act (IDEA) Amendments of 1997. The IDEA states that functional behavioral assessment and positive behavior support should be considered when behavior support is developed for children with disabilities. In effect, these amendments codify positive behavior support as an expected standard within the field of special education and most definitely within the behavior support provided for students with severe disabilities (Horner, Albin, Sprague & Todd, 2000). The following sections provide an overview of two important components of this technology and discuss Xxxxxxxx’s program within the context of these components.

Use of Functional Behavioral Assessment

A variety of strategies are available for identifying and assessing ecological factors and conditions that contribute to the problem behavior. A *functional behavior assessment* (FBA) is the gathering of information that defines the patterns of problem behavior, the *antecedents* associated with the problem behavior (e.g., boring or difficult classwork, verbal instructional demands; particular staff; specific times of day; transition between activities; unstructured activities; and so on); *setting events* that predict occurrence and nonoccurrence of the problem behavior, and the *consequences* that maintain the behavior. Setting events are those more general or distant conditions that increase the likelihood of a specific behavior occurring, such as whether the child had a good night’s

sleep, had a cold, ate breakfast, or had a problem on the school bus (Carr, Reeve, & Magito-McLaughlin, 1996; Taylor & Bailey, 1996).

As pointed out above, the use of Positive Behavior Support is embraced by IDEA's (1997) amendments which require states to have a policy regarding functional assessment and positive behavioral supports and requiring the decision-makers to consider when functional assessment and positive behavior supports should be used or have been used effectively (Turnbull & Turnbull, 1998). The law assumes that a functional behavioral assessment has occurred: "if the IEP team has not already conducted a functional behavioral assessment and implemented a behavioral intervention plan before the punishable behavior occurred, it must meet and develop an assessment plan to address that behavior" (20 U.S.C. 1415 (k)(1)(B)). Horner, Albin, Sprague, and Todd (2000) suggest that without a functional assessment, behavior support may be harmful, as a strategy that is implemented without this information may actually serve to *increase* the behavior it was intending to decrease. At this point there is about 20 years of empirical research that demonstrates that even the most serious problem behavior can be effectively addressed when behavior support is based on functional behavioral assessment. Some examples include: self-injurious behavior (Carr & McDowell, 1980; Day, Rea, Schussler, Larsen, & Johnson, 1988; Repp, Felce, & Barton, 1988); tantrumming (Carr & Newsom, 1985); and aggression (Bird, Dores, Moniz, & Robinson, 1989; Carr, Newsom & Binkoff, 1980).

While it was reported to this consultant by Dr. xxxxxxx that an FBA occurred, further inquiry into the strategies used to conduct such an assessment revealed little substance to this claim. Dr. xxxxxxx reported that he did not use any specific instruments or techniques to conduct a functional behavioral assessment. He indicated that his reference to results of an FBA were based simply on his observations of Xxxxxxxx. I inquired if these observations were any different from his usual observations of her behavior and he responded that he observed her when she was by her self, when there were demands, and so on. His reference to these conditions (by her self, demands, etc.) lead me to inquire if he actually conducted an analogue assessment. He indicated that he did not. [An *analogue assessment*, or *functional analysis* is the most studied and scientifically documented functional assessment method, which involves experimental manipulation of antecedent and/or consequence events that are hypothesized to control the problem behavior (Carr, 1994; Iwata, et al., 1982)]. The Proposed Behavior Modification Treatment Plan (March 18, 1998) refers to "Functional Analysis Information" (p. 8) (as opposed to *Functional Assessment*). It is stated that this Functional Analysis was based on extensive observations, antecedent-behavior-consequence analysis, Touchette Scatterplot, a review of records, and interviews with staff. As described above, a Functional Analysis (i.e., analogue assessment) is an experimental manipulation of variables. The information that was reportedly collected does not fit the requirements of a Functional Analysis (i.e., analogue assessment). Dr. xxxxxxx indicated that he did not have any data related to the Functional Analysis (or any type of Functional Behavioral Assessment). If a Touchette Scatterplot was

conducted, it would result in a graphic display of data; Dr. xxxxxxx reported to this consultant that there were no functional behavioral assessment data.

The information, data, and knowledge of the student that results from a FBA, is used to shape the content of the behavior support plan or intervention. This comprehensive plan is developed not only to effectively address the individual's problem behaviors, but to enhance the present and future lifestyle of the individual (Horner et al., 1990; Koegel, Koegel, & Dunlap, 1996; Brown, Gothelf, Guess & Lehr, 1998), for example, increasing positive presence in the school, social relationships with peers and adults, independence, and self-determination. These types of objectives and goals are not addressed in Xxxxxxxx's behavior plan nor within her IEP. (The quality of her IEP objectives will be discussed below).

Development of a Positive Behavior Support Plan

Focusing solely on the reduction of problem behaviors (such as through the use of contingent electric shock, water spray, or withholding reinforcement), and/or simply reinforcing appropriate behaviors is not considered a comprehensive behavior support plan. Interventions must involve teaching new skills that replace problem behavior over time and must be based on the conduct of a complete and comprehensive FBA.

Addressing the Communicative Intent of Problem Behavior. At the basis of a behavior support plan is the concept that problem behaviors serve some type of communicative function for the individual—in other words, the behavior serves a purpose for the person. Problem behavior functions as a form of communication for those individuals who do not (yet) possess or use more sophisticated forms of communication that would enable them to influence others to obtain a variety of desirable outcomes (Carr et al., 1994). There is an abundance of literature that has empirically demonstrated that problem behavior may function to access attention (e.g., Carr & McDowell, 1980; Durand, Crimmins, Caulfield, & Taylor, 1989), escape from unpleasant situations (e.g., Carr, Newsom, & Binkoff, 1980), or gain access to preferred or desired tangible items (e.g., Billingsley & Neel, 1985; Day, et al., 1988). Further, it is likely that many individuals use a single behavior to achieve many different goals (e.g., Carr & Carlson, 1993; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982). JRC acknowledges the importance of such communicative functions of behavior and suggest (although apparently without a documented functional behavioral assessment) that Xxxxxxxx's behaviors serve several functions: escape, access tangibles, sensory, and attention.

One major implication of this concept is that by strengthening relevant communication skills, it may be possible to replace problem behavior so that such behavior becomes much less frequent or is eliminated altogether. *Functional Communication Training*, or teaching *functionally equivalent behavior*, focuses on teaching students a response that serves the *same* function as their challenging behavior (Durand, 1990). The types of behaviors listed in the Proposed Behavior Modification Treatment Plan (pg. 7), while

identified as “replacement or alternative” behaviors for Xxxxxxxx, are not actually replacements for the intent of her problem behaviors. Replacement behaviors DIRECTLY serve the same function as the problem behavior. The process of functional communication training teaches the person to use appropriate communicative responses to request those things previously obtained by the challenging behavior (Durand, Berotti, & Weiner, 1993), and the newly trained response should evoke the same consequences as the targeted challenging behavior (Carr, 1988). Research has demonstrated that individuals with developmental disabilities with poor communication skills have higher levels of aggressive behavior than individuals with developmental disabilities that have better communication skills (Shodell & Reiter, 1968; Talkington & Hall, 1969; Talkington, Hall, & Altman, 1971). It is clear to this consultant that Xxxxxxxx would benefit greatly from functional communication training and intensive pragmatic language training. The behavior support plan does not include any components that would serve the purpose of providing Xxxxxxxx with a different, and more appropriate way, to communicate the very functions identified by JRC (i.e., escape, access tangibles, sensory, and attention). For example, “Xxxxxxxx’s Recommendations for IEP Update” (7/3/96) reflects three proposed annual goals in the area of communication: improve verbal skills; increase ability to follow directions; and increase computer skills. Instead of giving her alternative ways to express the hypothesized functions of her behaviors or fulfill her needs, JRC’s goals focus on compliance. (Further, the goal of “Improve verbal skills” was inappropriate because Xxxxxxxx is nonverbal. Thus, this is an inappropriate goal, regardless of the function of her problem behaviors).

The Proposed Behavior Modification Treatment Plan identifies “appropriate replacement or alternative behaviors” for Xxxxxxxx (p. 6); however, these behaviors are not “communicative alternatives” and do not meet any skill deficits which would allow her to more independently fulfill her needs. That is, they do not serve the same function as the challenging behavior and do not allow her more independence or control. For example, page 7 includes “Accurately signing Yes” as a replacement behavior. However, JRC indicated that ESCAPE was a function for “many of Xxxxxxxx’s major behaviors.” Signing “yes” certainly does not serve the same function as “escape.” Indeed, when “escape” is hypothesized to be a major function of behaviors, “NO!” should be the sign that is taught. Using the toilet, following directions, not pushing objects placed near her, etc. are not offering Xxxxxxxx ways of communicating what she intends to say (e.g., “I don’t want to do this,” “I want attention,” “I want to go somewhere”).

While Xxxxxxxx’s problem behaviors may indeed be reduced at this point in time, it is because of the punishment that has occurred (e.g., GED, water spray) and the threat of continued punishment. However, *Xxxxxxxx is not being taught skills that will allow her to manage her own behavior without the threat of punishment. It is unlikely that WHAT Xxxxxxxx wants to express will change, regardless of change in behavior. Thus, it is critical that she be provided with communication skills that offer her appropriate ways to communicate these same messages.* Learning to nod yes/no, or label objects in the environment chosen by others does not accomplish what is needed. Carr and Durand (1985) demonstrated the importance of matching the communication and the function. Following a functional analysis of the challenging behaviors of four students, students

were taught communications that either matched the assessed function or responses that did not match the function of the challenging behavior (“irrelevant responses.”). In each case, the student’s challenging behavior was reduced only when they used the communicative response that matched the function of that behavior. The behavior problems were not reduced when they were taught responses that did not match the function of the problem behavior. Without an effective replacement behavior that serves the same function as the problem behavior, it is not likely that XXXXXXXX will maintain any behavioral reductions if the punishment were to be removed. This certainly is not a good prospect for XXXXXXXX’s future. The goal of any behavioral program is to reduce external or artificial means of behavioral control, and to have each individual learn the adaptive behavior necessary to function as independently as possible in integrated settings. There are a plethora of articles (some referred to above) that empirically demonstrate the effectiveness and power of replacing the inappropriate form of communication with an appropriate form that serves the same function.

When a student is hypothesized to be escaping activities or situations, several constructive strategies should be considered. First, and as described above, XXXXXXXX could be systematically taught to escape these activities in a way that is more socially acceptable (e.g., “No”, “Break”, or “stop”, etc.) than the problem behavior. Second, an analysis should be done to determine exactly what activities from which she tries to escape. These activities should then be changed so that there is less reason to escape. In the current Proposed Behavior Modification Treatment Plan, the strategy seems to reinforce participation in activities from which she is trying to escape, and punishing escape attempts. Unless an activity is determined to be a high priority activity (e.g., related to health or safety), there is no reason to pursue activities in which she has clearly indicated that she is not interested in participating. The activities that are listed on her school schedule do not appear to be high priority activities (e.g., matching shapes on computer; following one step simple directions such as stand up or sit down, bean bag toss). Third, XXXXXXXX should be allowed and encouraged to choose activities in which she will participate. This recommendation supports the recommendation of Dr. XXXXXXXX who writes in her June 10, 1999 report, “I recommend that XXXXXXXX be allowed the greatest amount of freedom possible, based on her functioning and skills, regarding how she spends her free time, *choices of activities...*” Providing increased control of daily events is a strategy that has been extensively documented to reduce problem behavior related to escape (Bambara, Koger, Katzer, & Davenport, 1995; Dunlap, Kern-Dunlap, Clarke, & Robbins, 1991; Dyer, Dunlap, & Winterling, 1990).

Using the variables identified by JRC as associated with problem behaviors, more positive and constructive goals are suggested in Table 1 below. These goals represent the current literature that is readily available in journals such as Journal of Applied Behavior Analysis, American Journal on Mental Retardation, Journal of the Association of Persons with Severe Handicaps, Journal of Positive Behavioral Interventions, and books, such as Communicative Alternatives to Challenging Behavior: Integrating Functional Assessment and Intervention Strategies (Reichle & Wacker, 1993), Antecedent Control (Luiselli & Cameron, 1998), Positive Behavioral Support: Including

People with Difficult Behavior in the Community (Koegel, Koegel, & Dunlap, 1996), and Communication-Based Intervention for Problem Behavior: A User's Guide for Producing Positive Change (Carr, et al., 1994).

Table 1: Examples of positive, educative strategies to address Xxxxxxxx's problem behavior related to JRC hypothesized function of escape

Hypothesized Function	Positive/educative Strategies
Escape demands placed on her	<ul style="list-style-type: none"> <li data-bbox="812 598 1263 682">- Minimize demands and directives <li data-bbox="812 693 1263 787">- Change the form of the demands (e.g., use sign or visual instead of verbal instruction) <li data-bbox="812 808 1263 892">- Teach her to express "escape" by signing "no," "stop," or "break" <li data-bbox="812 913 1263 1039">- Change her level or form of participation (e.g., co-participation or expect a simpler response) <li data-bbox="812 1060 1263 1165">- Reinforce appropriate escape communication by immediately allowing escape <li data-bbox="812 1186 1263 1260">- Teach her to independently access preferred activities <li data-bbox="812 1281 1263 1375">- Decrease presence of nonpreferred activities so that less escape will be necessary <li data-bbox="812 1396 1263 1470">- Increase presence of preferred activities <li data-bbox="812 1491 1263 1585">- Increase positive setting events by embedding preferred activities in her daily schedule <li data-bbox="812 1606 1263 1713">- Provide choices of activities, places, arrangement of schedule, etc.

The above strategies are samples of the types of researched and documented strategies that have been highly effective in addressing the behavioral needs of

individuals who demonstrate the types of behaviors as Xxxxxxxx exhibits, when the function of the behavior is escape. The strategies used at JRC for Xxxxxxxx do not include these types of educative and constructive strategies.

Baseline, evaluation and monitoring of behavior support. Baseline data are conducted to determine the operant level of a target behavior, that is, the natural occurrence of the behavior before intervention, and provides a level of behavior against which the results of an intervention procedure can be compared (Alberto & Troutman, 1999). The Proposed Behavior Modification Treatment Plan states that “During Xxxxxxxx’s first 2 weeks on baseline period at JRC all of her behaviors were ignored and no demands were placed on her” (page 5). Ignoring Xxxxxxxx’s problem behaviors may have created an “extinction” condition. There are two expected outcomes of behavior when behavior is put on extinction: (1) an increase in the rate and/or intensity of the behavior, and (2) extinction-induced aggression (i.e., increase in aggression) (Alberto & Troutman, 1999). It is likely that staff created an extinction condition when they ignored Xxxxxxxx during baseline. The result would then be an increase in rate and intensity of the behavior and increase in aggression. This baseline condition would then create an artificially inflated rate of behavior; and this rate of behavior would be the level of behavior against which the results of subsequent interventions would be compared. Thus, the baseline condition may not have been reflective of Xxxxxxxx’s behavior under more standard baseline conditions (i.e., natural occurrence of the behavior).

Data collection is the backbone of applied behavior analysis. One purpose of collecting data is to determine the effects of a particular intervention to enable the behavior analyst to make decisions and modifications during the course of the intervention rather than waiting for weeks or months (Alberto & Troutman, 1999). Decision-making in Xxxxxxxx’s situation was not quite so timely. For example, it appears that at least 15 months elapsed without a decrease in aggressive behavior; no program changes are indicated on the chart throughout these 15 months (i.e., see chart labeled Agg (all) with headings from May 1997 through Dec. 1998). This is obviously an inappropriate length of time to wait before making a change. Behavior analysts must attempt to determine why a behavior is not descending and make program modifications based on their analysis of the data (Haring, Liberty, & White, 1980). It is inappropriate to wait too long before changing an ineffective program.

II: Review of Educational Program and Environment

In general an *eliminative* approach is used at JRC. An eliminative approach views behavior problems as maladaptive or interfering actions that make it impossible or difficult for the individual to learn. The goal of this approach is to decrease and eliminate those “maladaptive” behaviors BEFORE new, adaptive responses can be targeted (Meyer & Evans, 1989), and the behavior problems are regarded as the highest priority goals. In this approach, typically little value is placed on the quality of

the educational goals and objectives. One obvious problem with this approach is that the focus becomes the problem behavior, and access to those events, educational activities and environments that would promote more adaptive behavior are put on hold. Many times, it is the absence of the more constructive environment and activities that is the major contributor to the maintenance of the behavior. In contrast, the *educative* approach suggests that: (1) the major purpose of education is to encourage adaptive behavior through participation in meaningful daily experiences, and (2) the most effective strategy to reduce a problem behavior within these meaningful daily experiences is to replace it with a skill that accomplishes its function for the individual (i.e., functional communication training, skill building of more independent behavior, and environmental arrangements as described above). A review of Xxxxxxxx's daily schedule does not reflect access to meaningful daily experiences (see below).

Much research has established a strong relationship between the curriculum in which a student participates and the presence of problem behaviors. A major outcome of functional behavioral assessment should be information that leads to individualized modifications in the student's curriculum and instructional procedures (Dunlap & Kern, 1996). A number of studies have demonstrated that specific curricular variables can influence the occurrence or nonoccurrence of problem behavior. For example, Dunlap et al., (1991) used a functional assessment to determine specific revisions needed in the curriculum of a student who displayed kicking, hitting, spitting, throwing objects, turning over desks, and running out of the room. The student also required restraint for dangerous behaviors. Based on a functional behavioral assessment, revisions in the curriculum included: shortening the duration of any sessions requiring fine motor and concentrated academic activity; increasing use of visual cues; interspersing fine motor and other challenging requirements with easier large motor activities; designing activities that were interesting and lead to concrete and preferred outcomes; providing a menu of options for choices regarding the activity and/or the materials when possible. Curriculum revisions alone produced substantial and durable reductions in the student's behavior problems (also reducing use of restraint), and a dramatic increase in appropriate social behavior. Weeks and Gaylord-Ross (1981) reduced self-injury, aggression, and crying by decreasing task difficulty and providing opportunities for errorless learning; Kern-Dunlap, Clarke, and Dunlap (1990) reduced aggressive behavior in a student by incorporating a favorite hobby into her daily assignments.

The impact of Xxxxxxxx's curriculum, both in contributing to problem behaviors and in the resolution of problem behaviors, does not appear to be given much consideration or evaluation. Further, Xxxxxxxx's daily educational activities (as reflected on her daily schedule) do not appear to meet minimum educational standards. There appears to be a general lack of focus, concern or interest in appropriate skills, and skills that contribute to a person's participation in typical daily routines, quality of life and independence. The following sections describe (1) the relationship of Xxxxxxxx's educational program to current educational standards and practice and, (2) observations of implementation of Xxxxxxxx's educational program.

Educational Standards and Practice

In the last two decades a set of effective educational strategies have evolved that are based on research. There are well established practices and standards for developing instructional programs for students with severe disabilities, from assessing the student through developing the IEP, implementing it, and evaluating the progress on IEP goals and objectives. These well documented strategies are described in instructional texts such Instruction of Students with Severe Disabilities (Snell & Brown, 2000); Curricular and Instructional Approaches for Persons with Severe Disabilities (Cipani & Spooner, 1994); Introduction to Persons with Severe Disabilities: Educational and Social Issues (McDonnell, Hardman, McDonnell, & O'Donnell, 1995); Educating Children with Multiple Disabilities: A Transdisciplinary Approach (Orellove & Sobsey, 1991). Below are a sample of areas in which JRC has not met the standard of current educational and expected practices.

Measuring and graphing "skill-building" behaviors. During this consultant's interview with Dr. xxxxxxx, he indicated that skill acquisition objectives are not currently charted (even though JRC, according to Dr. xxxxxxx, has a "Charting Department."). Thus, it would be impossible to determine if progress was being made in any of these skills. This disregard reflects the lack of value placed on Xxxxxxxx's educational program. There are some 'acquisition' data presented in the Proposed Behavior Modification Treatment Plan, but suffers in at least two areas. First, these data (on this 1998 report) reflect data from 1995. Second, the presentation of the "daily median" in several applications is meaningless (at least to this reader). For example, what does .07/1.07X per min. mean in reference to bathing? What components of bathing? Rate of what?

Staff familiarity with educational goals, objectives and instructional strategies. It did not appear that any of the staff interviewed (xxxxxxx, xxxx, or xxxxx) were familiar with Xxxxxxxx's educational goals or objectives. For example, when asked "What social skills (including relationships), if any, is Xxxxxxxx working on?" none of the staff could respond. The staff interviewed had only a vague notion of the language skills and self-help skills identified as objectives for Xxxxxxxx. Similarly, staff were not able to describe what type of instructional strategies were used to teach Xxxxxxxx. Again, this lack of knowledge reflects the lack of value placed on Xxxxxxxx's educational program and social growth and development.

Selection of Instructional Strategies. The goal sheets contained in Xxxxxxxx's IEP (3/15/99) identify goals, but do not indicate which instructional methods were used. The array of methods listed on the Goal Sheets include Graduated Guidance and Backward Chaining. It is unclear how goals of prompt levels of 100 for bathing, or 55 for washing hair would be possible using these strategies. These strategies are designed to minimize the errors and need for prompts. For example, in Backward Chaining, a single behavior is targeted for instruction. How could 100 prompts be needed to teach a single behavior in a single task analysis? In Graduated Guidance,

prompts are intensive initially and then faded. The prompts are not faded until the student is participating more independently. Again, such high levels of prompts would not be needed. It is unlikely that staff could systematically follow such vague and ambiguous teaching strategies.

Identification of objectives that are age-appropriate and functional. A curriculum composed of activities with meaning and functional value to that individual has been shown to decrease the frequency of problem behaviors. For example, Dunlap et al. (1991), completely eliminated severely disruptive behavior (e.g., kicking, hitting, spitting, throwing objects, turning over desks) in an adolescent female by modifying curriculum materials such as arranging activities so the content was more interesting and lead to concrete and preferred outcomes, and providing choices regarding the activity and or the materials.

The school environment in which Xxxxxxxx participated was, for the most part, neither functional (i.e., teaching her skills that have a direct impact on her ability to participate in naturally occurring activities and routines across the day), nor age-appropriate (i.e., represent the skills, activities, and materials used by other individuals her age). Sitting in front of a computer that has a “match-to-sample” program on the screen would not likely be motivating for someone Xxxxxxxx’s age, nor is it a useful skill. While perhaps one can suggest that “match-to-sample” is a pre-requisite for functional activities such as sorting silverware, current educational practice would say that she should then directly learn to sort silverware—in a kitchen setting, and at functional times such as following the dishwasher completed, or after washing and drying the dishes.

That her tasks would not be of interest to her is of critical importance because it may be directly related to her distractibility and wanting to attend to other things while staff insist that she sit down and attend to the computer. Staff’s continual prompts such as, “No touching others without permission,” or “No stopping work,” reflect her disinterest in her task. Nonfunctional tasks lead to noninterest and nonparticipation, which lead to Xxxxxxxx’s attempts to avoid or escape, which leads to what staff would consider “noncompliance.” This situation then has a high probability of escalating into a power struggle, use of water spray, or perhaps application of contingent electric shock. Of course, an easier solution would be to give her more functional, age-appropriate, interesting, preferred, and self-selected tasks in which to participate.

For the most part, Xxxxxxxx’s IEP priorities are neither functional or age-appropriate. Skills such as stacking blocks, transferring tasks, matching shapes do not prepare her for the world of a 17 year old. At the age of 17, Xxxxxxxx should be learning vocational skills, domestic skills such as cooking and cleaning, communicating with others, and age-appropriate leisure activities. She should be taught how to make choices that are appropriate for her age and that impact her environment. Xxxxxxxx should be taught specific skills in the community—simply identifying numbers of times she will participate in outings is insufficient (and is a staff objective).

Activity-based instruction and integrated therapy. Activity-based instruction and integrated therapy use the context of familiar, functional, age-appropriate routines in school or community settings to teach critical skills such as communication, motor and social skills. The intent of these approaches is to teach at those times when targeted skills are actually needed, so the conditions are realistic and learning is likely to be maintained and generalized. This observer did not note any instances of activity-based or integrated therapy during the observation. The IEP Priorities identified in her IEP (3/15/99) included critical skills such as making a choice and signing. No instances of choice-making were observed. The only instance of signing that was observed was when Xxxxxxxx was given a sign to stand up. In order for either of these important skills to be learned, they would need to be embedded within the context of her daily routines so that they could be practiced in functional situations.

Communication Skills. Although the IEP states that the teacher should wait for naturally occurring activities and prompts to have the student sign, this was not observed. Xxxxxxxx did use the bathroom one time during the observation, but she was not instructed on how to use the bathroom sign. Similarly, no instances of instruction on signing "food" was observed when she was given edible reinforcers. There were no shaping, modeling or prompting strategies that were observed by this consultant.

Self-determination. The opportunity to express one's preferences and to make and enjoy choices is an important part of daily life for most people. The opportunity to assert preference and choice typically are viewed as critical to the process of one's personal growth and fulfillment (Hughes, Pitkin, & Lorden, 1998). Further, recent legislation (e.g., the 1992 Rehabilitation Act Amendments and the 1990 IDEA) mandate incorporating individuals' preferences and choices into the development of their educational and rehabilitation programs. Research also has demonstrated the impact of opportunities for choice and control on the reduction of problem behavior. For example, Dyer, Dunlap, and Winterling (1990) found that when students were allowed to select tasks and rewards (versus teacher selected tasks and rewards), there was a reduction in the incidence of problem behaviors. While this consultant would acknowledge that Xxxxxxxx could not now contribute to the development of her IEP in traditional ways (e.g., through verbal response to interview or survey; participation in a vocational preference assessment), she can easily contribute to this process in less traditional ways; that is, her *behavior* can be viewed as expressions of self-determination and these should be considered as input to the development of her plan. For example, if data indicated that Xxxxxxxx's off-task behavior was at a very high rate when asked to participate in "seat work," but was comparatively infrequent when the activity required a higher level of motor movement, then this information can be used to develop goals and objectives that focus more on activities requiring motor activity. Further, Xxxxxxxx made many attempts at self-determination during this consultant's observation (e.g., to get up; to end the activity, to interact with others); staff attempted to suppress all attempts at self-determination.

Although Xxxxxxxx has an IEP Priority (IEP, 3/15/99) “Make a choice,” it is not clear what this means. There are many types of choices that an individual can make—some more meaningful than others. Choices can range from selecting between a blue peg versus a red peg, to choosing in which activity to participate or to refuse participation in an activity. The earlier choice of one meaningless concrete object, versus another concrete object is indeed a choice, but not one that is as significant as others that actually have an impact on one’s life. It is not clear what types of choices are intended to be given to Xxxxxxxx. None were observed during this consultant’s observation.

Evaluation of qualitative outcomes. It is not sufficient to focus merely on the reduction of problem behaviors. Evaluation must extend beyond the reduction of isolated problem behaviors and should include measurement of variables that might effect her overall emotional well-being such as social relationships, time spent with peers without disabilities, participation in preferred work, school, home and leisure activities, and opportunities for self-determination.

Individualized. Neither the educational nor behavioral program is individualized for Xxxxxxxx. While admittedly there is some level of individualization *within* a goal or strategy (e.g., which step of the computer matching shapes program; which Level 3 aversives to use), there appears to be no individualization in the selection of goals and strategies themselves. In other words, the treatment procedures and behavioral strategies identified for Xxxxxxxx are the same treatments identified for most other students. Consequently one can assume that functional behavioral assessments (to whatever degree they were conducted) do not inform program development as dictated in IDEA and in the guidelines disseminated by the New York State Department of Education. The use of Functional Behavioral Assessment results in a uniquely designed behavioral and educational program.

Contact with Nondisabled Peers. There do not appear to be any planned contacts with students who do are not disabled. This is a goal that is clearly stated in IDEA. Research demonstrates that children with even the most severe disabilities can benefit from participation and inclusion with his or her nondisabled peers—on both social and academic dimensions (e.g., Dugan, et al., 1995; Haring & Breen, 1992; Hunt, et al., 1994). The IEP does not refer to objectives that would that even prepare Xxxxxxxx to interact with peers.

Focus on social relationships. The only objectives that have to do with “others” are: touching others appropriately, not pushing person standing near her, and give object to another person. While these have to do with another person, they would not contribute to the development of “relationships” with others. “Relationships” is a critical educational outcome and as such must be systematically taught. Goals in this area might focus on teaching participation in social interactions that facilitate play, companionship, helping another, being helped by another, and participating in a reciprocal relationship with a peer.

Transition services. IDEA requires that a statement of the transition service needs of a student must be added to the IEP beginning at age 14, and at age 16 the student's IEP must include a "statement of needed transition services" (Turnbull & Turnbull, 1998). No such statement is made on Xxxxxxxx's IEP. The transition provision of IDEA mandates that LEAs use community-referenced, community-based, and community-delivered instruction. The purpose of this provision is to insure that the student will learn the skills in the place where the student will use them. The continued lack of attention to Xxxxxxxx's future reflects the inattention to her participation in functional, age-appropriate activities that would contribute to her gaining any independence within her daily routines. The only objective identified for Xxxxxxxx that resembles "vocation" (i.e., Works without stopping on a 25 piece transfer task), is more of a behavioral objective than a vocational objective. A vocational objective would actually prepare her for a specific work task. The current objective focuses on building compliance, rather than skill. In the absence of an interesting task to do, most people would find it difficult to work for 40 minutes without stopping.

Classroom observation

Xxxxxxxx was sitting in front of a computer for most of the observation. The computer was modified with a plastic casing that had several holes in it designed to guide the responder and increase the likelihood of success. On the screen was a "match-to-sample" program. During my observation there were two staff who, at different points during the observation, provided 1:1 feedback to Xxxxxxxx. In general, Xxxxxxxx did not get specific feedback related to her academic task (match-to-sample), only feedback related to her behavior.

General environment. The environment at JRC is not age-appropriate for a young woman of 17 years of age. The décor is replete with Disney characters and candy sculptures.

Instructional strategies. There were no instructional strategies focused on teaching her to respond correctly to the computer task. I did not see one instance of the aide prompting or modeling in any way the correct answer. There was not even the most basic use of instructional strategies. Thus, Xxxxxxxx was never provided instruction on the educational objective "Computer Match Shapes." Further, not only was there an absence of instruction on the skill, she was actually provided feedback and praise for *incorrect* responses on this objective. When Xxxxxxxx received the few instance of praise for her behavior (i.e., Good working consistently on computer," and "Good sitting appropriately at your computer") she was not looking at the computer, nor engaging in a correct response. In other words, the use of praise was not contingent on correct behavior. It was clear from my observation that Xxxxxxxx's behavior was the focus of the session, and not her IEP objective (further evidence of the eliminative approach to behavior).

Quality of interactions and verbal exchanges. I found the verbal interactions between Xxxxxxxx and her aide inappropriate on a number of dimensions. First, while there were frequent verbal exchanges, they mostly concerned NOT doing behaviors (e.g., not touching others, not touching others' materials, not spitting, not stopping work no hand play, etc.). This observer conducted three one-minute samples comparing negative and positive verbal feedback to Xxxxxxxx. In the first one-minute observation there were 3 positive statements to Xxxxxxxx, and 13 negative statements. In the second one-minute observation 3 positive and 4 negative statements were recorded; and in the third observation, 1 positive and 9 negative statements were recorded.

Second, the phrasing of the statements to Xxxxxxxx were on an inappropriate cognitive and developmental level. The length of the utterances were typically too long (many were five and six words long), and the complexity of the grammar and vocabulary was too sophisticated (e.g., "No nonfunctional movement of objects").

Third, the tone of the positive and negative feedback to Xxxxxxxx was essentially the same. That is, while the words spoken were different there was a monotone affect that made the messages the same. "No touching others without permission" sounded essentially the same as "Good sitting appropriately at your computer." As described above, it is not likely that Xxxxxxxx could understand the complexity of the statements, and this is then further obscured by the monotone presentation of the statements—Xxxxxxxx would not likely be able to discriminate a positive from a negative statement.

Fourth, Xxxxxxxx was never verbally given any alternatives to those behaviors deemed inappropriate by her aide. For example, Xxxxxxxx was not verbally instructed, shown or prompted how to interact with staff or appropriately get their attention instead of "no touching others without permission." She was not taught how to appropriately interact with the student sitting next to her, but was informed "No nonfunctional movement of objects," and "No stopping work."

Consistency of behavioral strategies. As described above, verbal praise was often not contingent on Xxxxxxxx actually doing her task. Essentially, Xxxxxxxx received praise for having her hand on the computer. While this would be appropriate in a shaping strategy, there is no indication that this type of strategy was planned. The corrective verbal statements Xxxxxxxx received were not consistent—for example she was given feedback such as "No nonfunctional movement of objects" when she touched her neighbor's materials—but this only happened occasionally. Many opportunities were missed. Similarly, the prompts of "No stopping work" and "No hand play" were not consistently implemented—many instances of these behaviors occurred with no feedback.

CONCLUSIONS

This report concludes with two major considerations on which to reflect. First, it is critical that the aversive and painful behavioral program used with Xxxxxxxx be re-

evaluated considering the lack of attention to current standards of applied behavior analysis and special education technologies and the overwhelming body of literature documenting alternative effective behavioral and educational strategies. Second, this observer must urge those responsible for monitoring the strategies used at JRC to also consider the impact of this aversive behavioral program on the young professionals and professionals-in-training who are implementing the plan.

This report reflects this consultant's professional judgement that the extraordinary means of behavior suppression (i.e., aversive strategies) that are used with Xxxxxxxx are not appropriate or justified. These extraordinary measures are used in the absence of any serious attempts to use what is now considered to be the standard of practice for effective behavior support; similarly, current standard special educational practices have not been implemented. The lack of educative and constructive replacement behaviors prohibit Xxxxxxxx from learning the types of skills and behaviors that would allow her to participate in less restrictive settings. It is this consultant's recommendation that an expert in special education of students with severe disabilities and problem behavior be contracted to work with JRC to design an appropriate educational program that is in line with the intent and requirements of IDEA, and that reflects current educational standards.

The use of punishment creates a negative reinforcement paradigm for the individual delivering the punishment. That is, using something as painful as shock to suppress behavior will have an immediate effect; thus, the person who delivers the punishment is reinforced for using the punishment (i.e., because the behavior stopped, at least temporarily, the person who implemented the punishment is reinforced; this person is thus likely to use the procedure again). This "punishing behavior" on the part of the punishment-giver is further maintained because punishment is easy to use and requires no special training (Sidman, 1989). Further, the application of punishment procedures does not depend on a functional analysis of the variables controlling the problem behavior (Carr, Reeve, & Magito-McLaughlin, 1996). Perhaps the reliance on punishment procedures masks the need for the type of functional assessment strategies identified in IDEA (which are meant to insure the use of positive behavior supports).

Aside from issues related to delivery of aversive stimuli to Xxxxxxxx (and other residents), the impact on the individuals who administer the shock is of great concern to this consultant. Foxx, McMorrow, Bittle, and Bechtel (1986) have recommended that each person who is responsible for administering shock should experience the shock prior to its implementation. If direct care staff and administrative staff have not experienced contingent electric shock, they should absolutely do so. If the policy at JRC is to have staff experience the pain of the shock, then follow-up must occur because the pain of the shock is extremely intense and staff must then emotionally deal with the fact that they are administering such severe pain to another person. *Knowing the intensity and pain involved, and then administering such pain (often with great frequency), will likely have a major impact on staff. If there is NO emotional impact on the person administering the shock, then he/she is not fit to work with people with*

disabilities, as they likely do not see the individual as a real person. If they do understand and acknowledge the impact of what they are doing to another person, then they should receive ongoing guidance from a trained counselor to assist them to reflect on their actions that create pain in another human being. This counselor should be a trained professional not associated with JRC so that staff would feel free to express themselves about their experiences without the fear of reprisal or impact on their job.

Submitted by:

A rectangular box containing a handwritten signature in black ink. The signature is written in a cursive style and appears to read "Fredda Brown".

Fredda Brown, Ph.D.
Professor

References

Alberto, P. A., & Troutman, A. C. (1998). Applied behavior analysis for teachers (5th ed.). New Jersey: Charles Merrill.

Bambara, L. M., Koger, F., Katzer, T., & Davenport, T. (1995). Embedding choice in daily routines: An experimental case study. Journal of The Association of Persons with Severe Handicaps, 20, 185-195.

Billingsley, F. F., & Neel, R. S. (1985). Competing behaviors and their effects on skill generalization and maintenance. Analysis and Intervention in Developmental Disabilities, 5, 357-372.

Bird, F., Dores, P. A., Moniz, D., & Robinson, J. (1989). Reducing severe aggressive and self-injurious behaviors with functional communication training. American Journal on Mental Retardation, 94, 37-48.

Brown, F. Gothelf, C. R., Guess, D., & Lehr, D. H. (1998). Self-determination for individuals with the most severe disabilities: Moving beyond chimera. Journal of the Association for Persons with Severe Handicaps, 23, 17-26.

Carr, E. G. (1988). Functional equivalence as a mechanism of response generalization. In R. Horner, R. Koegel, & G. Dunlap (Eds.), Generalization and maintenance: Life-style changes in applied settings (pp. 221-241). Baltimore: Paul H. Brookes.

Carr, E. G. (1994). Emerging themes in the functional analysis of problem behavior. Journal of Applied Behavior Analysis, 27, 393-399.

Carr, E. G., & Carlson, J. I. (1993). Reduction of severe behavior problems in the community using a multicomponent treatment approach. Journal of Applied Behavior Analysis, 26, 157-172.

Carr, E. G., Levin, L., McConnachie, G., Carlson, J. I., Kemp, D. C., & Smith, C. E. (1994). Communication-based Intervention for problem behavior: A user's guide for producing positive change. Baltimore: Paul H. Brookes.

Carr, E. G., & McDowell, J. J. (1980). Social control of self-injurious behavior of organic etiology. Behavior Therapy, 11, 402-409.

Carr, E. G., & Newsom, C. D., (1985). Demand-related tantrums: conceptualization and treatment. Behavior Modification, 9, 403-426.

Carr, E. G., Newsom, C. D., & Binkoff, J. A. (1980). Escape as a factor in the aggressive behavior of two retarded children. Journal of Applied Behavior Analysis, *13*, 101-117.

Carr, E. G., Reeve, c. E., & Magito-McLaughlin, D. (1996). Contextual influences on problem behavior in people with developmental disabilities. In L. K. Koegel, R. L., Koegel, & G. Dunlap (Eds.), Positive behavioral Support: Including people with difficult behavior in the community (pp. 403-423). Baltimore: Paul H. Brookes.

Cipani, E. C., & Spooner, F. (1994). Curricular and instructional approaches for persons with severe disabilities. Boston: Allyn and Bacon.

Day, R. M., Rea, J. A., Schussler, N. G., Larsen, S. E., & Johnson, W. L. (1988). A functionally based approach to the treatment of self-injurious behavior. Behavior Modification, *12*, 565-589.

Dugan, E., Kamps, D., Leonard, B., Watkins, N., Rheinberger, A., & Stackhaus, J. (1995). Effects of cooperative learning groups during social studies for students with autism and fourth-grade peers. Journal of Applied Behavior Analysis, *28*, 175-188.

Dunlap, G., & Kern, L. (1996). Modifying instructional activities to promote desirable behavior: A conceptual and practical framework. School Psychology Quarterly, *11*, 297-312.

Dunlap, G., Kern-Dunlap, L., Clarke, S., & Robbins, F. R. (1991). Functional assessment, curricular revision, and severe behavior problems. Journal of Applied Behavior Analysis, *24*, 387-397.

Durand, V. M. (1990). Severe behavior problems: A functional communication training approach. New York: The Guilford Press.

Durand, V. M., Berotti, D., & Weiner, J. S. (1993). Functional communication training: Factors affecting effectiveness, generalization, and maintenance. In J. Reichle & D. P. Wacker (Eds.) Communicative alternatives to challenging behavior: Integrating functional assessment and intervention strategies. (pp. 317-342). Baltimore: Paul H. Brookes.

Durand, V. M., Crimmins, D. B., Caulfield, M., & Taylor, J. (1989). Reinforcer assessment I: Using problem behavior to select reinforcers. Journal of the Association for Persons with Severe Handicaps, *14*, 113-126.

Dyer, K., Dunlap, G., & Winterling, V. (1990). Effects of choice-making on the serious problem behaviors of students with severe handicaps. Journal of Applied Behavior Analysis, *23*, 515-524.

Foxx, R. M., McMorrow, M. J., Bittle, R. G., & Bechtel, D. R. (1986). The successful treatment of a dually-diagnosed deaf man's aggression with a program that included contingent electric shock. Behavior Therapy, *17*, 170-186.

Haring, T. G., & Breen, C. (1989). Units of analysis of social interaction outcomes in supported education. Journal of the Association for Persons with Severe Handicaps, *14*, 255-262.

Haring, N. G., Liberty, K. A., & White, O. R. (1980). Rules for data-based strategy decisions in instructional programs: current research and instructional implications. In W. Sailor, B. Wilcox, & L. Brown (Eds.), Methods of instruction for severely handicapped children (pp. 159-192). Baltimore: Paul H. Brookes.

Horner, R. H., Albin, R. W., Sprague, J. R., & Todd, A. W. (2000). Positive behavior support. In M. E. Snell & F. Brown (Eds.), Instruction of students with severe disabilities (pp. 207-244). New York: Charles E. Merrill.

Horner, R., Dunlap, G., Koegel, R., Carr, E., Sailor, W., Anderson, J., Albin, R., & O'Neill, R. (1990). Toward a technology of "nonaversive" behavioral support. Journal of the Association for Persons with Severe Handicaps, *15*, 125-132.

Hughes, C., Pitkin, S. E., & Lorden, S. W. (1998). Assessing preferences and choices of persons with severe and profound mental retardation. Education and Training in Mental Retardation and Developmental Disabilities, *33*, 299-316.

Hunt, P., Staub, D., Alwell, M., & Goetz, L. (1994). Achievement by all students within the context of cooperative learning groups. Journal of the Association for Persons with Severe Handicaps, *19*, 290-301.

Iwata, B. A., Dorsey, M. F., Slifer, K. J., Bauman, K. E., & Richman, G. S. (1982). Toward a functional analysis of self-injury. Analysis and Intervention in Developmental Disabilities, *2*, 3-20.

Kern-Dunlap, L., Clarke, S., & Dunlap, G. (1990). Increasing the "meaningfulness" in curriculum content to reduce problem behaviors in a severely emotionally disturbed student. Paper presented at the tenth annual convention of the Florida Association for Behavior Analysis (FABA), Orlando.

Koegel, L. K., Koegel, R. L., & Dunlap, G. (Eds.) (1996), Positive behavioral support: Including people with difficult behavior in the community. Baltimore: Paul H. Brookes.

Luiselli, J. K., & Cameron, M. J. (1998). Antecedent control: Innovative approaches to behavioral support. Baltimore: Paul H. Brookes.

Mace, F. C., & Roberts, M. L. (1993). Factors affecting selection of behavioral interventions. In J. Reichle & D. P. Wacker (Eds.) Communicative alternatives to challenging behavior: Integrating functional assessment and intervention strategies (pp. 113-133). Baltimore: Paul H. Brookes.

McDonnell, J. J., Hardman, M. L., McDonnell, A. P., & Kiefer-O'Donnell, R. (1995). An introduction to persons with severe disabilities: Educational and social issues. Boston: Allyn and Bacon.

Meyer, L. H., & Evans, I. M. (1989). Nonaversive intervention for behavior problems: A manual for home and community. Baltimore: Paul H. Brookes.

Orelove, F. P., & Sobsey, D. (1991). Educating children with multiple disabilities: A transdisciplinary Approach (2nd edition). Baltimore: Paul H. Brookes.

Reichle, J., & Wacker, D. P. (Eds.). (1993). Communicative alternatives to challenging behavior: Integrating functional assessment and intervention strategies. Baltimore: Paul H. Brookes.

Repp, A. C., Felce, D., & Barton, .L.E. (1988). Basing the treatment of stereotypic and self-injurious behaviors on hypothesis of their causes. Journal of Applied Behavior Analysis, 21, 281-289.

Shodell, M. J., & Reiter, H. H. (1968). Self-mutilative behavior in verbal and nonverbal schizophrenic children. Archives of General Psychiatry, 19, 453-455.

Sidman, M. (1989). Coercion and its fallout. Boston: Authors Cooperative, Inc.

Snell, M. E., & Brown, F. (2000). Instruction of students with severe disabilities. New Jersey: Merrill.

Talkington, L. W., & Hall, s. M. (1969). Hearing impairment and aggressiveness in the mentally retarded. Perceptual and Motor skills, 28, 303-306.

Talkington, L. W., Hall, S, & Altman, R. (1971). Communication deficits and aggression in the mentally retarded. American Journal of Mental Deficiency, 76, 235-237.

Turnbull, H. R., & Turnbull, A. P. (1998). Free appropriate public education: the law and children with disabilities (5th edition). Denver: Love.