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Effects of a collaborative parent-professional positive behavior support team training on challenging behaviors of children with autism

Traci Elaine Ruppert
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EFFECTS OF A COLLABORATIVE PARENT-PROFESSIONAL POSITIVE
BEHAVIOR SUPPORT TEAM TRAINING ON CHALLENGING
BEHAVIORS OF CHILDREN WITH AUTISM

by

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Bachelor of Science
University of Wisconsin, Eau Claire
2007

A thesis submitted in partial fulfillment of
the requirements for the

Master of Science in Special Education
Department of Education
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December 2009

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THE GRADUATE COLLEGE

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ABSTRACT

Effects of a Collaborative Parent-Professional Positive Behavior Support Team Training on Challenging Behaviors of Children with Autism

by

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Positive behavior support (PBS) involves applying individualized approaches to appropriate behaviors and reducing problem behaviors in a way that produces long-lasting improvements in a person's lifestyle. To date little research is available on the effects of the PBS process on challenging behavior in the home environment. The purpose of this study was to investigate the effects of collaborative parent-professional PBS team training on challenging behaviors of children with autism. Two parent-professional teams along with two focus individuals participated in this study. The parent and professional attended one, seven-hour day training. Home observations, one-hour in length, were conducted four times per week following the team training. The effects of the team training intervention were assessed using a multiple baseline across behaviors design. Results indicated that the PBS team training was effective for decreasing challenging behaviors of children with autism.

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CHAPTER 1

INTRODUCTION

In the 1980s there were major advancements in how services should be organized and provided to persons with disabilities (Dunlap, Sailor, Horner, & Sugai, 2009). The two main areas of development before the 1980s, deinstitutionalization/civil rights and behavior modification/use of aversives, were very controversial and neither of these treatments could be transferred to community-based settings (Dunlap et al., 2009). The problem for community- and school-based professionals was to create a practice to develop social skills for students with severe behavioral disabilities with procedures appropriate for school settings (Dunlap et al.). This led to an immediate need for research and development on new practices. In 1983, Renzaglia and Bates purposed a framework under which aversives could be understood in a broad context of school and community settings (Dunlap et al.). Renzaglia and Bates (1983) listed extinction, time-out, verbal reprimands, restraint, overcorrection, and response cost as treatments that could be applied to problems and that would be acceptable in schools. During this time, other research was being done and published on why aberrant behaviors were occurring and under what conditions, rather than simply asking how to eliminate the behavior (Dunlap et al.). This led to functional analysis and functional assessments (Dunlap et al.). Also, new research into the effects of aversives shed more doubt on the use of highly intrusive consequence-based strategies in schools and other community settings (Dunlap et al.). There was a tremendous need for a scientifically grounded practice of nonaversive behavioral intervention (Dunlap et al.). Positive behavior support (PBS) became the name associated with this research and practice (Dunlap et al.).

PBS helps individuals and their supporters achieve a quality of life that is defined by their personal choices (Dunlap et al., 2009). Behavior affects how the individuals live and how they receive support guided by their preferences (Dunlap et al.). What the individuals' do, where they do it, how competently they do it, and when they choose to do it affects their ability to build and maintain relationships, acquire new skills, establish and continue employment, and achieve personal leisure goals (Dunlap et al.). Problem behaviors such as aggression, self-injury, and disruption are a major barrier to the social, vocational, and physical success of each individual (Dunlap et al.). The main goal of PBS is to help individuals change their lifestyle so all significant supporters recognize and enjoy an improved quality of life (Carr et al., 2002). Another important goal of PBS is to make problem behavior irrelevant, inefficient and ineffective (Carr et al.). PBS does this by helping individuals achieve their goals in a socially acceptable manner that subsequently results in reduced or eliminated episodes of problem behavior (Carr et al.).

PBS emerged from three major sources: (a) applied behavior analysis, (b) the normalization/inclusion movement, and (c) person-centered values (Carr et al., 2002). Applied behavior analysis (ABA) is the systematic extension of the principles of operant psychology to problems and issues of social importance (Baer, Wolf, & Risley, 1968). ABA has provided PBS with the concepts of the three-term contingency, setting event, establishing operations, stimulus control, generalization, and maintenance (Carr et al., 2002). Also, ABA has provided PBS with the assessment strategies of functional analysis, empirical methodologies and intervention strategies of shaping, fading, chaining, prompting, reinforcement contingencies, and procedures for reducing problem behavior (Carr et al.). The Normalization/Inclusion movement provides PBS with the

principle and ideal that people with disabilities should live in the same settings as others and have access to the same types of opportunities as others (Carr et al.). Normalization leads to the principle of inclusion. Inclusion facilitates individuals into the mainstream of society (Carr et al.). In education, inclusion involves placing students with disabilities in general education classrooms instead of special education facilities (Carr et al.). Once the individual leaves the education setting, inclusion involves replacing group homes and other congregate facilities with supported living arrangements, and replacing artificial social and recreational opportunities with those emphasizing participation with people who may not have disabilities (Carr et al.). The person-centered values provide PBS with the idea that science tells us how we can change things, but values tell us what is worth changing (Carr et al.). In PBS, strategies are judged with respect to efficacy, and also with respect to their ability to enhance personal dignity and opportunities for choice (Carr et al.).

Initially, PBS focused on individuals with severe disabilities whose characteristics were associated with histories of aversive interventions (Dunlap et al., 2009). PBS consisted of a functional behavior assessment (FBA) and the assessment based selection of antecedent manipulations, teaching strategies, and a rearrangement of reinforcement contingencies to emphasize the use of positive events and the reduction or removal of aversive consequences (Dunlap et al.). The PBS approach was extended through controlled research with students with emotional and behavioral disorders and severe emotional disturbance, young children with disabilities, and with numerous other populations of individuals with behavioral challenges (Dunlap et al.). Within the past decade, PBS has become increasingly recognized as a distinctive approach with a

widespread base of practitioners, proponents, and constituencies and as a means of improving the general public's access to the applied behavior analysis technology (Sugai et al., 2000). As PBS developed with individuals, it became increasingly evident that school-wide or classroom-wide management was clearly absent (Dunlap et al., 2009). In the late 1990s and early 2000s, the multitiered framework of school-wide PBS (SW-PBS) became an essential element of the PBS approach (Sugai et al., 2000). Another important development of PBS is influencing communities of practice as diverse as children's mental health, juvenile justice, Head Start, family therapy and support, and child welfare (Dunlap et al., 2009).

Statement of Problem

Parenting challenges can include negative parent-child interactions, coercive control, and high levels of stress and social isolation (DuPaul et al., 2001; Johnston and Mash, 2001). Managing challenging behavior, the most commonly reported parenting difficulty (Bromley, Hare, Davison, & Emerson, 2004), is a significant source of parental stress and impacts the quality of life of children with autism spectrum disorders (ASD) and their families. Whether identified and described as behavioral deficits (e.g., a lack of socially appropriate communication skills) or behavioral excesses (e.g., repetitive and disruptive behaviors), persistent behavioral challenges, presented by a child with developmental delays can negatively impact the family unit (Baker et al., 2003).

It has long been recognized that parental involvement in intervention practices designed to impact parent-child interactions are best delivered with direct and active participation of family members. The best intervention outcomes are achieved when these strategies are implemented in the family home (Odom et al., 2003). Unfortunately,

parental beliefs about the nature and causes of challenging behavior residing within the child (e.g., genetics) have negatively impacted the level of treatment fidelity and the sustainable effects of parent training over time (Baden & Howe, 1992). Morrissey-Kane and Prinz (1999) suggested that parents' beliefs about child behavior change has directly impacted parental acceptance and committed action to parent training interventions. Specifically, parents who are unwilling to accept that their child's behaviors are, at least in part, a result of adult-child-environment interactions are less likely to implement evidence-based parenting practices with fidelity. These parents are more apt to have low expectations related to the benefits of parent training models, and may seek and implement treatment options designed to focus on child change alone (e.g., medication) (Hoza et al., 2000; Miller & Prinz, 2003).

The PBS team training model used in this study addresses parenting challenges by (a) assessing and identifying parent and family goals and values, (b) teaching a basic problem-solving strategy using a variety of non-technical examples to address challenges to family values that may be interfering with goal achievement, (c) connecting parents of children on the autism spectrum with evidence-based parenting practices as solutions to challenges presented to families of children with autism, and (d) planning for behavior change within the family-identified values system to support their child with ASD. This is a novel approach to traditional functional behavioral support parent training because the content is (a) deliberately contextual to fit within family-identified value systems (i.e., learned and unlearned reinforcers) increasing the likelihood of "transfer of training" consistent with a "train-the-trainers" model (Neef, 1995); (b) delivered using everyday language with carefully selected examples found in popular press, trade books (i.e. Roam,

2008; Watanabe, 2009), graphics and familiar cartoons illustrating basic behavior analytic principles to explicitly teach the FBA and an abbreviated support planning processes; and (c) designed to teach proactive problem-solving techniques with novel, self-identified problems, promoting generalization and maintenance of acquired problem solving skills. The participants produced a family driven, abbreviated behavior support plan developed within an outcomes-based problem solving model. This support plan was applied to parenting challenges. This unique combination of support represents a new approach to addressing the needs faced by parents of children with ASD.

Purpose and Research Question

The purpose of this study was to investigate the effects of a collaborative parent-professional PBS team training on challenging behaviors of children with autism. Specifically, parent and professional perceptions and understanding of the PBS team training was investigated in relationship to the child's challenging behavior. To address this purpose, the following research question was answered.

Does collaborative parent-professional PBS team training result in a decrease in child challenging behavior within the home environment?

Significance of the Study

Positive behavior support (PBS) involves applying individualized approaches to appropriate behaviors and reducing problem behaviors in a way that produces long-lasting improvements in a person's lifestyle (Horner et al., 1990). PBS is based on behavioral principles and derived from functional assessments (Dunlap, Newton, Fox, Benito, & Vaughn, 2001). For more than three decades, it has been researchers, psychologists, and other experts who have implemented intervention, but PBS represents

a movement toward natural supports in the community (Carr et al., 2002). Most people have a broad network of social support that includes siblings, friends, and grandparents, but their participation as active intervention agents is rare (Carr et al.). Carr et al. state that there should be training of inter-professional teams, including parents, that reflects the PBS focus on the supporters' participation instead of simply training experts in university settings who subsequently go out into the field to instruct others. The type of training that Carr et al. recommend involves a collaborative relationship between expert professionals, parents, teachers, residential and work support staff, and childcare providers. Collaboration takes place on case formulation, goal setting, and intervention selection (Anderson, Russo, Dunlap, & Albin, 1996). Advocates of PBS promote a team-based approach that includes input and participation from all individuals who are invested and involved in the life of the focus individual (Dunlap et al., 2001). A team-based approach to functional analysis and PBS mandates a large measure of family involvement (Dunlap et al.). When a problem behavior occurs in the home a parent-professional collaboration is needed in order to design interventions that fit the context (Marshall & Mirenda, 2002). Moving toward a truly collaborative approach with regard to intervention planning should reduce the occurrence of behavioral interventions that fail (Marshall & Mirenda).

This study provided several benefits. First, the parents and the professionals who participated in the PBS team training benefited by increasing their effective teaching and capability to manage their children and students with challenging behavior. Second, the children and students of the parents and professionals who participated benefited behaviorally as a result of the PBS team training. Third, this study contributed to the

collaborative parent-professional PBS team training literature. Specifically, this study offered a specific PBS training model for parents to use within the home environment. Finally, the collaborative parent-professional PBS team training at the UNLV Center for Autism Spectrum Disorders (CASD) benefited as a result of their training being evaluated and assessed for improvements.

Limitations of Study

This study included a limited number of participants, two parent-professional teams with two focus individuals. The participants were recruited using the Center for Autism Spectrum Disorders listserv and website, the Desert Regional Center Autism Program, and Nevada Early Intervention Services, and nominated themselves for participation. The participants live in the Las Vegas, Nevada area so results may not generalize to other urban environments. All data collection of the focus persons' challenging behaviors was conducted in the home environments so caution should be used when generalizing to other settings (i.e. school, community).

Definition of Terms

1. Antecedent – an environmental condition or stimulus change existing or occurring prior to a behavior of interest (Cooper, Heron, & Howard, 2007).
2. Applied Behavior Analysis (ABA) – The science in which tactics derived from the principles of behavior are applied to improve socially significant behavior and experimentation is used to identify the variables responsible for the improvement in behavior (Cooper et al., 2007).
3. Asperger's Disorder –
 - A. Qualitative impairment in social interaction, as manifested by at least two of

the following:

- (1) marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
- (2) failure to develop peer relationships appropriate to developmental level
- (3) a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest to other people)
- (4) lack of social or emotional reciprocity

B. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:

- (1) encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
- (2) apparent inflexibility adherence to specific, nonfunctional routines or rituals
- (3) stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)
- (4) persistent preoccupation with parts of objects

C. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning.

D. There is no clinically significant general delay in language (e.g., single words used by age 2 years, communicative phrases used by age 3 years).

E. There is no clinically significant delay in cognitive development or in the

development of age-appropriate self-help skills, adaptive behavior (other than in social interaction), and curiosity about the environment in childhood.

F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia (American Psychiatric Association, 2000).

4. Attention-deficit/hyperactivity disorder (ADHD) –

A. Either (1) or (2):

(1) Six (or more) of the following symptoms of inattention have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

- (a) often fails to give close attention to details or makes careless mistakes in homework, work, or other activities
- (b) often has difficulties sustaining attention in tasks or play activities
- (c) often does not seem to listen when spoken to directly
- (d) often does not follow through with instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
- (e) often has difficulties organizing tasks and activities
- (f) often avoids, dislikes or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
- (g) often loses things necessary for tasks or activities (e.g. toys, school assignments, pencils, books, or tools)
- (h) is often easily distracted by extraneous stimuli

(i) is often forgetful in daily activities

2) Six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Hyperactivity

(a) often fidgets with hands or feet or squirms in seat

(b) often leaves seat in classroom or in other situations in which remaining seated is expected

(c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)

(d) often has difficulty playing or engaging in leisure activities quietly

(e) is often "on the go" or often acts as if "driven by a motor"

(f) often talks excessively

Impulsivity

(g) often blurts out answers before questions have been completed

(h) often has difficulty awaiting turn

(i) often interrupts or intrudes on others (e.g. butts into conversations or games)

B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.

C. Some impairment from the symptoms is present in two or more settings (e.g. at school [work] and at home).

D. There must be clear evidence of clinically significant impairment in social, academic or occupational functioning.

E. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a personality Disorder) (American Psychiatric Association, 2000).

5. Autistic Disorder –

A. A total of six (or more) items from (1), (2), and (3), with at least two from (1), and one each from (2) and (3):

(1) qualitative impairment in social interaction, as manifested by at least two of the following:

(a) marked impairments in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body posture, and gestures to regulate social interaction

(b) failure to develop peer relationships appropriate to developmental level

(c) a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest)

(d) lack of social or emotional reciprocity

(2) qualitative impairments in communication as manifested by at least one of the following:

- (a) delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime)
 - (b) in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others
 - (c) stereotyped and repetitive use of language or idiosyncratic language
 - (d) lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level
- (3) restricted repetitive and stereotyped patterns of behavior, interests and activities, as manifested by at least two of the following:
- (a) encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
 - (b) apparently inflexible adherence to specific, nonfunctional routines or rituals
 - (c) stereotyped and repetitive motor mannerisms (e.g hand or finger flapping or twisting, or complex whole-body movements)
 - (d) persistent preoccupation with parts of objects
- B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, (3) symbolic or imaginative play.
- C. The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder (American Psychiatric Association, 2000).

6. Behavior – the activity of living organisms; human behavior includes everything that people do (Cooper et al., 2007).
7. Consequence – a stimulus change that follows a behavior of interest (Cooper et al., 2007).
8. Duration – a measure of the total extent of time in which a behavior occurs (Cooper et al., 2007).
9. Establishing Operation (EO) – a motivating operation that establishes (increases) the effectiveness of some stimulus, object, or event as a reinforcer. For example, food deprivation establishes food as an effective reinforcer (Cooper et al., 2007).
10. Frequency data collection – a ratio of count per observation time; often expressed as count per standard unit of time (e.g. per minute, per hour, per day) and calculated by dividing the number of responses recorded by the number of standard units of time in which observations were conducted (Cooper et al., 2007).
11. Functional Analysis (FA) – an analysis of the purposes (functions) of problem behavior, wherein antecedents and consequences representing those in the person's natural routines are arranged within an experimental design so that their separate effects on problem behavior can be observed and measured (Cooper et al., 2007).
12. Functional Behavior Assessment (FBA) – a systematic method of assessment for obtaining information about the purposes (functions) a problem behavior serves for a person; results are used to guide the design of an intervention for decreasing the problem behavior and increasing appropriate behavior (Cooper et al., 2007).

13. Function of behavior – the reason or purpose of behavior. There are four main functions of behavior: social attention, to gain access to something desired, to escape or avoid, and/ or internal stimulation (Macht & Zirpoli, 2008).
14. Generalization – a generic term for a variety of behavioral processes and behavior change outcomes (i.e., generalized behavior change, response generalization, setting generalization and stimulus generalization) (Cooper et al., 2007).
15. Maintenance – the extent to which the learner continues to perform the target behavior after a portion or all of the intervention has been terminated (i.e., response maintenance), a dependent variable or characteristic of behavior (Cooper et al., 2007).
16. Multiple-baseline across behaviors design – A multiple-baseline design in which the treatment variable is applied to two or more different behaviors of the same subject in the same setting (Cooper et al., 2007).
17. Positive Behavior Support (PBS) - involves applying individualized approaches to appropriate behaviors and reducing problem behaviors in a way that produces long-lasting improvements in a person's lifestyle (Horner et al., 1990).
18. School-Wide Positive Behavior Support (SW-PBS) – is a systems approach for establishing the social culture and individualized behavior supports needed for a school to be a safe and effective learning environment for all students (Sugai & Horner, 2009).
19. Setting event – events that change the probability of occurrence of a three-term contingency without differentially altering reinforcer probability (Kennedy & Itkonen, 1993).

20. Stimulus control – a situation in which the frequency, latency, duration, or amplitude of a behavior is altered by the presence or absence of an antecedent stimulus (Cooper et al., 2007).
21. Three-term contingency – The basic unit of analysis in the analysis of operant behavior; encompasses the temporal and possibly dependent relations among an antecedent, behavior, and consequence (Cooper et al., 2007).
22. Trend – the overall direction taken by a data path. It is described in terms of direction (increasing, decreasing, or zero trend), degree (gradual or steep), and the extent of variability of data points around the trend. Trend is used in predicting future measures of the behavior under unchanging conditions (Cooper et al., 2007).

Summary

Problem behaviors that individuals with developmental disabilities engage in have major consequences to their social, vocational, and physical success. PBS helps an individual change their lifestyle and enjoy an improved quality of life and makes problem behavior ineffective. Many times the people that are in the individuals close circle are not involved in the PBS process which may result in a breakdown of the behavior plan. The participation of professionals, parents, and teachers provide the individual with a support team from all aspects of their life. The purpose of this study was to investigate the effects of a collaborative parent-professional PBS team training on challenging behavior of children with autism. Specifically, parent and professional perceptions and understanding of the PBS team training was investigated in relationship to the child's challenging behavior.

Details related to this study are discussed in the subsequent chapters. In chapter 2, a review of literature relevant to this study is presented. Chapter 3 contains a description of the methodology used for implementation of the study. The results of the study and a discussion of the implications are provided in Chapters 4 and 5.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The purpose of this chapter is to summarize and analyze four bodies of research. The first is related to the family-focused positive behavior support (PBS) model and case studies to support it. The second is related to the effects of parent-professional collaboration of PBS on routines and challenging behavior. The third is related to staff and parent training. The fourth is related to parenting challenges and the family context in the assessment and treatment planning process. The chapter begins with a discussion of the literature review procedures and selection criteria used to determine which studies would be included in the review are described. Next, there is a review and analysis of literature related to the family-focused PBS model and case studies that support it. Then, a review and analysis of the literature related to the effects of parent-professional collaboration of PBS on routines and challenging behavior is provided. This is followed by a review and analysis of literature related to staff and parent training and a review and analysis of literature related to parenting stress and the family context in the assessment and treatment planning process. The chapter concludes with a summary of all the literature reviewed with a focus on questions that require further research.

Literature Review Procedures

A systematic search through the following computerized databases was conducted: Academic Search Premier, Elton B. Stephens Company (EBSCO), Education Resources Information Center (ERIC), and PsychINFO. The following descriptors were used: positive behavior support, autism, behavior, family, behavior modification, challenging behavior, parent training, and parent-professional collaboration.

Selection Criteria

For the review of literature related to the family-focused PBS model and case studies that support it, studies were included in the review if: (a) the study provided a model for family-focused PBS that included parent-professional collaboration, (b) the study provided a case study that involved challenging behavior, and (c) the participant was diagnosed with an autism spectrum disorder. Studies were excluded if: (a) the study did not provide a model that included parent-professional collaboration, (b) the study did not provide a case study, and (c) the participant was diagnosed with any other developmental disability.

For the review of the literature related to the effects of parent-professional collaboration of PBS on routines and challenging behavior, studies were included in the review if: (a) the purpose of the study was to examine the effects of a parent-professional collaboration of PBS on changing children behaviors, (b) data on the child behavior change were presented, and (c) the researchers employed an experimental or quasi-experimental design. Studies were excluded if: (a) the intervention procedure did not include parent-professional collaboration, (b) data on behavior change were not presented, and/or (c) the study did not involve implementation of a behavior change procedure.

For the review of the literature related to staff and parent training, studies were included in the review if: (a) the researchers examined parent or staff training (b) the goal of the parent or staff trainings was to decrease challenging behavior, and (c) the study provided a model for the parent or staff training. Studies were excluded if: (a) the goal of parent or staff trainings did not involve challenging behavior, (b) the study did not

involve a model for the parent or staff training, (c) the study examined the use of medication to decrease challenging behaviors, and/or (d) the purpose of the study was to examine errorless compliance training.

For the review of literature related to parenting stress and the family context in the assessment and treatment planning process, studies were included in the review if: (a) the purpose of the study was to examine contextual fit in treatment or parenting stress, (b) the researchers investigated parent-child interactions, and (c) parenting stress and challenging behaviors were examined. Studies were excluded if: (a) the study did not address parent stress, (b) the study did not involve parent stress and challenging behaviors, and/or (c) the researchers did not examine parent-child interactions.

Review and Analysis of Studies Related to the Family-Focused PBS Model and Case

Studies that Support It

Becker-Cottrill, McFarland, and Anderson (2003) discussed some of the models for intervention services that are used for individuals with autism. The researchers also provided a case study that describes the family focus PBS process for one child, his family, and the support team members. The first model discussed is the expert-driven model of training. There are three different approaches to this model. The first approach is the clinical model of treatment which involves the therapist who develops and implements the training programs and conducts the therapy in a clinical setting for a designated number of hours per week. The second approach is the consultation model. In this model, an expert in a specific area (e.g., education, communication, physical therapy) conducts observations and assessments either in a clinic or in the child's natural environment, provides written and/or verbal recommendations for program development,

and may or may not follow-up to see if the programs are implemented correctly. The third approach is the parent education model. In this model, the parents are provided with an initial training by an expert for a short period of time and follow-up training occurs as necessary. This approach may also have a therapist observing and providing written recommendations or hands-on training while monitoring student and trainee progress. These expert-driven model approaches address the problems and concerns of families related to meeting the needs of their children (e.g., building skills and reducing or eliminating challenging behaviors). Program development and recommendations are solely provider-based. This model is child centered and does not focus on the importance of family context and quality of life issues.

The second model is the ecological or ecobehavioral approach. This model provides services for families and takes into account that family income, resources, and marital status can have an impact on the family's ability to assist in the education of their children at home. The programs that are developed meet the needs of each individual family by basing the programs on family values and situations. Two approaches to the ecobehavioral model are the wraparound process and PBS. PBS and the wraparound process require no expert in the development of the support plan, but instead there is a team, including the family, that collaboratively develops all aspects of the plan and is responsible as a team to ensure appropriate implementation. The process is also ongoing, so programs are monitored closely to ensure they are meeting the needs of the family and child.

According to Becker-Cottrill et al. (2003) there are several essential elements of the family focus PBS model. The PBS process begins with the family focus support team that

provides the group action-planning component and is the motivating factor behind the success of the behavior support plan. The team is made up of people who are significant in the life of the focus child. Next, the behavior support plan is used to document the action plans of the support team which include functional assessment plans and resulting data, targeted behaviors and strategies, alternative skill development, long-term lifestyle goals, and strategies to address quality of life issues. In this model, a facilitator is included that has knowledge of autism, strategies to increase adaptive skills and reduce challenging behaviors. This facilitator guides the family focus process through all phases and is responsible for the organization of key activities. The facilitators use their professional knowledge to shape the intervention plans in equal partnership with all support team members. Another important part of this model is the community partner that provides social support to families of children with special needs. The community partner usually is a parent of a child with autism or a related disability who resides in the same geographic location as the focus family that can provide support and encouragement.

Becker-Cottrill et al. (2003) also identified key activities for the family focus PBS model. The first activity is family-centered planning. This process develops behavioral intervention strategies and behavioral interventions that fit well with the people affected and the environments where implementation occurs. The second activity is the planning alternative tomorrows with hope (PATH). This tool is usually incorporated into the first family focus support team meeting and serves to provide direction for the entire team. The team looks at goals that are positive and possible within a certain time period (usually 6 months to 2 years). The process also includes the identification of people and

agencies that will need to be enrolled to ensure the success of the plan. The third activity is a functional behavioral assessment (FBA) used to determine how the challenging behavior is related to various environmental events. The FBA involves formal and informal interviews of care providers and an educational staff member, direct observation data collection, and determines how challenging behaviors are related to immediate antecedents, consequences, and setting events. The fourth activity is the lecture-based training. A lecture series is provided for all team members conducted by the facilitator and provides the educational background on an overview of PBS, an overview of autism, person-centered planning, support plan development, teaching alternative skills, crisis planning, and evaluation. The last activity is the individualized parent and teacher training. This training is specific to interventions and strategies identified by the support team for the person with autism and are provided to those team members who will implement the interventions across environments.

The case study described by Becker-Cottrill et al. (2003) illustrates the family focus PBS process for a child, his family and support members. The participant was a 4 year old boy that was diagnosed with autism. He attended a local preschool program three times a week for half a day and his mother went to school with him because of safety concerns on the part of the county school system. His mother had to arrange her work hours to accommodate his school schedule. Team members included his parents, brother, aunt, grandparents, babysitter, a family friend, two special education teachers, a general education teacher, the special education director, a school psychologist and a case manager. The family-centered planning and assessments revealed that extended-family members were involved in supporting the family and that opportunity to participate in

sports-related events were important to the family. Also, his parents reported that he controlled or influenced many of the choices they made as a family. The team participated in all the lectures and meetings. The team determined that increasing his mean length of utterances, teaching him to follow directions, increasing his ability to toilet independently, and decreasing his outbursts would be the target behaviors and data would be collected on each of these.

Baseline data indicated that he used primarily one word utterances. He was able to complete 29% of the steps of a 15-step toileting task analysis independently. He followed the direction “time to go” an average of 70% of the time but only followed the directions “sit down” and “come here” an average of 52% and 29% of the time, respectively. Baseline data also indicated he had an outburst an average of 7.3 times per day.

The team developed a task analysis of his toileting routine and posted this visually as a reminder for those working with him. Team members modeled appropriate verbalizations and expanded on his verbalizations. The team also taught him specific phrases to request attention so that the outbursts that were motivated by the opportunity to gain attention were ignored. When outbursts were motivated by the opportunity to escape requests, the adult ignored the outburst, assisted him in following through on the request, and then provided praise for following the request, even though he was prompted to do so.

Direct observation data were collected following implementation of the plan and approximately 1 year later as a follow-up to the PBS training. His mean length of verbal utterances increased from an average of 1 during baseline to 2.8 during treatment to 7.2 at the 12-month follow-up. The percentage of steps of the toileting routine that he could

complete independently rose from 29% to 75% and to 81% of the steps independently at follow-up. His ability to follow directions improved to an overall average percentage of 80% during treatment and follow-up. Outbursts decreased in frequency from an average of 7.3 times per day to 4.7 times per day after the plan was implemented and at follow-up he had an outburst an average of 1.3 times per day.

Becker-Cottrill et al. (2003) concluded there is a need to depart from the expert driven model and embrace the team driven model of training. Additionally, these researchers noted that the team driven model of training needs to incorporate family-centered planning, the use of formal and informal supports, and the development of a comprehensive plan to address not only behavioral and educational goals but also issues related to community involvement and family life. They also emphasized that the family-focused PBS model has key elements to address family concerns related to difficulties in accessing services, limited involvement in interventions, services that are not effective in meeting the needs of the child or family, and lack of interagency collaboration. Finally, Becker-Cottrill et al. pointed out the need to focus more intensively on evaluation measures of service-delivery systems and multi-component comprehensive studies of service delivery systems incorporating PBS and other similar ecological models. These studies could have a major impact on how large community agencies serve families and children. Along with the interesting case study, these researchers made some very valid points about what needs to be involved in the family-focused PBS model, but also mentioned how the PBS and the wraparound process fail to concentrate on the evaluation and follow-up measures. Thus, more research is needed in this area.

Buschbacher and Fox (2003) also discussed the PBS process and provided a case study to demonstrate the value of the PBS approach for young children with autism. The researchers identified five essential steps in the PBS process. The first step is team building. The team should include the family, teacher, a speech-language pathologist, paraprofessional, other related service personnel, and/or classmates. The family should be involved in school-based settings and in the person-centered planning. Family involvement with the assessment and intervention process in the school-base setting should be discussed, agreed on, and supported by the team. Some families might want to observe their child at school, receive written updates on their child's progress, or attend workshops on PBS. Other families might want to participate in a functional assessment interview, participate in team meetings, collect data, implement intervention strategies at home and in the community, and teach others to implement functional assessments and the intervention strategies. Families and their support team in a person-centered planning process use personal futures planning, group action planning, and planning alternative tomorrows with hope (PATH) to make goals for the child with autism and to develop an action plan.

The second step in the PBS process is comprehensive functional assessment. The goal of the comprehensive functional assessment is to gain an understanding of the function of the challenging behavior and when the behavior is most and least likely to occur. The functional assessment process includes interviews with parents, school staff, and others significant in the child's life, direct observations, review of archival records, and structured functional analysis.

The third step is hypotheses development. The information gathered in the functional assessment process results in the team's development of hypotheses regarding the challenging behavior. A hypothesis statement includes a description of the antecedents, the behavior, consequences, and communicative function of the behavior. The hypothesis statement helps build the support plan for the child.

The fourth step is comprehensive support plan development. The support plan is developed using the hypothesis statements to create conditions that make the problem behavior unnecessary and ineffective for the child. The five elements of a support plan are the behavior hypotheses, the long-term strategies and supports to assist the child, the prevention strategies, the replacement social and communication skills, and the consequential strategies for how other people should respond to the replacement skills and challenging behaviors.

The fifth and final step of the PBS process is implementation of the support plan and outcomes measurement. The implementation of the support plan should "fit" with the personal, cultural, and structural values and contexts of the child, family, and classroom. The "contextual" fit has a direct implication for implementation fidelity. The team should evaluate the effectiveness of the plan and the achievement of meaningful outcomes on an ongoing basis. The outcomes should include decreases in challenging behavior; increases in the targeted replacement skills, changes in the child's overall social and behavioral competence, increased engagement in learning activities, and developing friendships.

The case study discussed by Buschbacher and Fox (2003) demonstrates the value of the PBS approach for a young child with autism. The participant was a 3 year old boy that was diagnosed with an autism spectrum disorder. He was enrolled in a self-contained

early childhood classroom for children with autism. He demonstrated intense and prolonged tantrums that disrupted his family's life and interfered with his ability to be productively engaged and responsive to instruction at school and in therapy. Challenging behaviors were evidenced in all of his environments (e.g., home, community, school, therapy). He usually engaged in a tantrum during transitions, self-care activities, and when his parents or peers attempted to join his play. Team members included his parents, grandparents, teacher, speech language pathologist, occupational therapist, paraprofessionals, and two couples who were friends of the family.

The person-centered planning meeting was held to identify goals to be achieved. The comprehensive functional assessment following the person-centered planning meeting was conducted to gather information about the problem behaviors, identify the possible triggers and maintaining variables associated with the challenging behaviors, and to conduct observations within the routines identified. The entire team met to review the information and formulate hypotheses regarding the challenging behavior. The team determined that there were four hypotheses for his tantrums: (a) escape (avoid) a demand or task he perceived as difficult or did not understand, delay or escape (avoid a transition from one activity/toy to another, (b) protest another person ending a preferred activity before he has decided to do so, (c) request help with a difficult activity, and (d) request attention or comfort when upset, ill, or hurt. The team developed a comprehensive behavior support plan. The team decided to provide photo/icon schedule activities, transition warnings and icons to request help/break or communicate all done, choice boards, "First...Then" board to help with transitions, wellness/emotion board, and to honor his "no" at times. The team also decided to use a 4-second wait time after giving

him a direction or asking a question was provided so he could process what had been said. Finally ‘social stories’ were read to him to prepare him for novel situations, and model replacement skills. Six months later, his tantrums were minimal, he willingly sought out and used his visual schedules and choice boards, increasingly verbalized requests and protests, engaged in simple dramatic play with others, and participated in an increased number of community, education, and therapeutic activities.

Buschbacher and Fox (2003) concluded that the PBS process should include team building, comprehensive functional assessment, hypothesis development, comprehensive support plan development, and lastly implementation of the support plan and outcomes measurement. They also noted the process is costly in staff time and teamwork, but is more likely to result in positive outcomes for the child, instructional personnel, and the child’s family. Buschbacher and Fox (2003) provided a model for the PBS process and a case study for support, but failed to discuss how they measured the challenging behaviors and evaluated the effectiveness of the intervention.

Marshall and Mirenda (2002) described the parent–professional collaboration for positive behavior support and illustrated the process with a case study of a child with autism and the unique challenges that are faced when implementing such interventions in the home. The researchers discussed four phases of the PBS process. The first phase is building relationships. In this phase the consultant and the family develop a relationship so they can engage in a mutual problem-solving process. The second phase is conducting a functional assessment of the behaviors of concern. This phase is used to identify the behaviors of concern, conduct a functional assessment, develop hypotheses, and identify family routines as contexts for intervention.

The third phase is collaborating to develop a behavior support plan. An effective positive behavior support plan requires change related to variables such as physical setting, medications, schedule, teaching strategies, interaction style, and/or consequences for behavior and must be directly based on the results of the functional assessment process. The fourth phase is collaborating to implement and revise the support plan. In this phase, the team offers the family as many tools and strategies to use during intervention as they are able to manage and provides them with instruction and ongoing support regarding implementation.

The case study that Marshall and Mirenda (2002) described demonstrates the use of parent–professional collaboration for the positive behavior support process for a child with autism in the home environment. The participant was a 4 year old boy that was diagnosed with mild/high-functioning autism. He attended an inclusive preschool program for children with autism and their typical peers. The team included his parents with support of a consultant. The consultant spent time getting to know the family and their routines. The team determined that most of his problem behaviors occurred in the home environment. The behaviors of concern included problems with toileting, refusing to share toys and include his brother in play activities, refusing to take turns or share, demonstrating aggression toward his brother and peers, picky eating, screaming, saying “no” when asked to participate in daily routines, hitting, kicking, and refusing to go to bed at night. The team decided to target behaviors related to following his own agenda because when his agenda was violated he engaged in a variety of noncompliant and aggressive behaviors that were disruptive to the entire family.

After the functional analysis interview (FAI), baseline data were obtained over a 2-day period at home using the functional analysis observation (FAO) form to record information regarding the topography and frequency of his problem behaviors that were related to following his agenda. From the FAI and FAO the team hypothesized that when he was engaged in a preferred activity and was presented with a demand related to an unpreferred activity, he either made no response or was noncompliant, hits, kicks, and screams in order to escape from the demand. This was more likely to occur if he was hungry, rushed, or tired. Routines were also identified by the team for intervention. The routines identified were mealtime, toileting, hand washing, tooth brushing, and dressing in the morning. The team decided to use visual schedules and symbols for food and drink choices at mealtime for the intervention. The team was able to implement the visual schedules and choice symbols consistently through his daily routines. The frequency of his behavioral episodes was reduced from 20 per day to 4 or fewer per day four and six weeks later. He progressed from wearing diapers 100% of the time to urinating in the toilet independently most of the time at home and in untrained settings such as his preschool. He followed the schedule for washing his hands, tooth brushing, and dressing right away and followed each of these all without any problem behaviors.

Marshall and Mirenda (2002) concluded that the parent-professional collaboration for the positive behavior support process should include building relationships, conducting a functional assessment of the behaviors of concern, collaborating to develop a behavior support plan, and collaborating to implement and revise the support plan. They emphasized considering factors such as family relationships, communication styles, and cultural backgrounds in both the design and implementation of positive behavior support

plans. The most important test of the effectiveness of any family-centered collaboration is the extent to which its effects endure over time and continue to be implemented even after formal consultant supports are discontinued because they have become seamlessly integrated into the family's lifestyle and interaction patterns. The researchers also noted the benefits of family-centered positive behavior support are not achievable without the expenditure of considerable time and effort on the part of both the consultant and the family. Marshall and Mirenda provided a model for the parent-professional collaboration for the positive behavior support process and a case study that supports it in the home environment, but discussed the effectiveness of the intervention through mostly anecdotal measures and only a few frequency data collection points.

Review and Analysis of Studies Related to the Effects of Parent-Professional Collaboration of PBS on Routines and Challenging Behavior

Duda, Dunlap, Fox, Lentini, and Clarke (2004) conducted a study to expand the evaluation of PBS as a model of support for young children in typical community preschool settings. There were two participants in the study. The first participant was a 3 year old girl diagnosed with Down syndrome who engaged in aggressive behavior, had difficulty remaining on-task, responding to teacher redirection, running away from the area, mouthing objects, and disrupting other children. The second participant was a 3 year old girl who had been evaluated for physical, developmental, and speech concerns. She exhibited excessive crying and whining, avoided interactions with peers, and screamed and cried for prolonged periods of time. The study took place in a small, faith-based inclusive community preschool. The teacher and paraprofessional selected two whole-

class activities, opening circle and planning, for the intervention because they were considered the most problematic ones in the children's daily routine.

A team was formed consisting of the child's parents, the preschool teacher, the classroom paraprofessional, the preschool director, the assistant preschool director, and the PBS consultants. Two formal team meetings of 1 hour each were conducted prior to the intervention to introduce the PBS approach, describe the elements of the model, develop goals for the target children, and agree on roles to be assumed by each team member. A functional assessment was conducted for the two participants. The consultants conducted systematic behavioral observations to identify problematic routines and individual problem behaviors to be targeted for intervention. They also developed operational definitions and hypotheses for the dependent variables and collected data via videotapes that were scored later by trained observers. The team developed intervention strategies which included changing the way that the group activities were conducted with the entire class and providing individualized support for both participants.

An ABAB design was used to analyze the effects of the PBS interventions for both children across the two activities of opening circle and planning. The first A phase consisted of collecting baseline data and the first B phase involved implementing the intervention components. The intervention components were subsequently withdrawn in the second A phase and then reintroduced in the second B phase. During the intervention phases, the teachers' were coached and provided models for the individualized procedures before each session, and were also provided positive feedback at the end of each session. The coaching sessions ranged from 5 to 10 minutes. The intervention sessions across conditions ranged from 10 to 20 minutes, with the average session lasting

13 minutes. Data were collected on engagement and problem behaviors. The observations of engagement and problem behaviors were scored from videotaped recordings obtained during each session of the study. Observations were scored using a 10-s continuous interval system and were expressed as the percentage of observed intervals.

Participant 1 showed a higher rate of engagement and lower rates of problem behaviors during the two intervention conditions compared to the two baseline phases for both opening circle and planning activities. Participant 2 also showed a higher rate of engagement and lower rates of problem behaviors during the two intervention conditions compared to the two baseline phases for both opening circle and planning activities, but at a lesser magnitude than Participant 1.

In this study, the effects of PBS consultation and intervention for preschool age children were associated with an increase in engagement and a reduction in challenging behaviors across two independent contexts in a community inclusive preschool setting. The researchers suggested future research be conducted to examine the relative contributions of intervention components to determine the effect sizes of partial versus complete implementation, environmental design and programmatic efficiency, and analysis of the most efficient process for achieving needed changes in preschoolers' behavioral repertoires. The study provided many strong points for the PBS process, but only included girl participants with problematic behaviors. Also, the teachers implemented the environmental structure interventions (e.g., following specific seating arrangements, using proximity control, setting predictable routines) more consistency than the individualized interventions (e.g., providing specific opportunities for child-directed praise or questions).

Lucyshyn, Albin, Horner, Mann, Mann and Wadsworth (2007) conducted a study to provide a direct replication and extension of Lucyshyn et al. (1997), and intended to strengthen the internal and external validity of the PBS approach with families by employing an experimental, single-subject research design. They also intended to offer additional empirical evidence of quality-of-life improvements in the life of a child with a developmental disability and severe problem behaviors, and adequately address a lifespan perspective by extending repeated follow-up measurement for a period of 7 years post intervention.

The participant was a 5 year old girl when the study began and 15 years old when it concluded. She was diagnosed as having autism and a severe intellectual disability. She attended a special needs classroom in a neighborhood elementary school from age 6 to age 12, and similar services in a neighborhood middle school from age 12 to age 15. Her problem behaviors included screaming and screeching at a high pitch and volume, physically resisting prompts to do tasks and activities, and leaving her assigned area by running away. The four family routines chosen were valued by the family and were used in the home and community. These routines included a dinner routine, going to bed routine, restaurant routine and grocery shopping routine.

Observation sessions in the home and community were videotaped using an 8-mm video camera. Data were later collected using a software observation program to record rate and duration. Observation probes were conducted across baseline, maintenance support, generalization promotion, and follow-up phases. Training probes were conducted only during an initial training and support phase for the dinner, going-to-bed, and restaurant routines. The dependent variables were the rate of problem behavior,

latency in minutes to termination or successful completion of routine, frequency of parent-reported indicator behaviors, child activity patterns, average parent rating of social validity of PBS approach, average parent rating of contextual fit of PBS plan, and average parent rating of social validity of research procedures. The problem behaviors were screaming or screeching, physical resistance to parental assistance, leaving the assigned area, disruptive or destructive behavior, and physical aggression.

A multiple-baseline design across four settings was used to evaluate the functional relationship between the positive behavior support approach and improvements in the problem behavior and routine participation. The design consisted of five phases: (a) baseline, (b) initial training and support in the dinner, going-to-bed, and restaurant routines, (c) maintenance support in the three trained routines, (d) generalization promotion for the grocery shopping routine and (e) follow-up. The functional assessment interview and observations resulted in three hypotheses for the functions of the problem behavior (i.e., to escape the aversive request, demand, or situation; to obtain the item or activity; to get parent attention). The positive behavior support plan that supported parent implementation included parent training, support activities and a delineation of roles and responsibilities.

There was a 94% decrease in the rate of problem behaviors from baseline to intervention and follow-up. During baseline across all routines, problem behaviors averaged 8.1 per minute and decreased to an average of 1.5 per minute during the initial training and support phase in the dinner, bedtime, and fast-food restaurant routines. Problem behaviors were at an average of 1.5 per minute during the maintenance support phase across the three routines. In the generalization promotion phase, problem behaviors

decreased to an average of 1.3 per minute. Follow-up data showed an average of 0.5 per minute. The dinner routine averaged 0.6 problem behaviors per minute across five follow-up measures spanning 86 months. The bedtime routine averaged 0.6 problem behaviors per minute across four follow-up measures spanning 86 months. The grocery store averaged 0.6 problem behaviors per minute across 36 months, while the fast-food restaurant evidenced 0.2 problem behaviors per minute at 6 months post intervention. The participant spent an average of 2.1 min in the routines. During initial training in the dinner, bedtime, and restaurant routines, latency improved to an average of 10.8 min. During maintenance support in the three routines, latency in minutes decreased to an average of 9 min. During generalization promotion, latency improved to an average of 5.7 min in the grocery store. During the intervention phase, 27 of 36 routines (75%) were completed successfully. During follow-up across the four routines, latency in minutes declined to an average of 8.7 min in routines. At follow-up all 13 routines (100%) were completed successfully. The data indicate gradual improvement in behaviors from baseline to intervention phase, and sustained and continued improvement during the 86-month follow-up period. The data indicate that community activity patterns increased following intervention and maintained and showed further improvement during follow-up.

Lucyshyn et al. (2007) concluded that positive behavior support in families of children with developmental disabilities decreased problem behavior and increased participation in routines. The researchers also found that the family-centered positive behavior support is cost-effectiveness in the long term even though the intervention effort was time intensive during initial training and support in each routine. Limitations that the

researchers recognized that could be addressed in future research were nonidentification of the specific components of the intervention that contributed to the behavior change, limited generalization, and inability to interpret the maintenance of behavior change as a function of the intervention.

Buschbacher, Fox, and Clarke (2004) conducted a study to contribute to the evidence base on the effectiveness, acceptability, and durability of PBS with parents implementing the intervention in the home environment. In this study, parents not only implemented the intervention, but they also were equal partners in the assessment, identification of quality of life goals for the child and family, development of nontechnical augmentative supports, implementation of intervention strategies, and outcome measurement. The researchers collected data on parent-child positive and negative interactions, the use of video rating for social validity, and long-term follow-up.

The participant was a seven-year-old boy who was dually diagnosed with autistic-like characteristics and Landau-Kleffner syndrome. He attended a class for children with communication disorders at a public elementary school campus. He communicated primarily through nonvocal means (e.g., grabbing, pointing, leading, gesturing, and a few manual signs), screaming, growling, crying, self-injury, and aggression toward others (e.g., tackling, head-butting, biting, kicking and spitting). The authors conducted a person-centered planning meeting with the child's supporters to help the parents write an action plan for three home routines that were identified as important and problematic. The three home routines were dinner, family television watching, and bedtime. Meetings occurred between the parents and interventionist to plan, construct, and review assessment and intervention strategies. This included a functional assessment of each

behavior within each routine, collection of baseline data, generation of hypotheses for the function of each behavior, development and implementation of the intervention strategies, and collection of social validity data.

The parents with support from the researchers implemented a multiple-baseline design across three daily routines design. The parents and interventionist met and developed a support plan for each routine which included long-term supports, prevention strategies, replacement skills to be taught, and consequences. The interventionist reviewed and coached the parents through the routine during the first 2 days of the intervention. Each session was recorded using a hand-held video camera by the research assistant. Data were collected on the percentage of intervals with the target problem behavior exhibited during each of the three routines. Problem behavior was marked if there was any occurrence within a 10-second interval. Data were also collected on socially acceptable engagement in the routines. Engagement was scored if he was involved in an activity for at least 70% of an interval. Percentage of intervals with adult positive and negative interactions was collected. Positive interactions were recorded if there was an occurrence of verbal or nonverbal praise, physical affection, assistance to help complete a routine, or attempts to elicit response or interaction. Negative interactions were recorded if physical guidance was provided in an effort to terminate an inappropriate behavior or verbal or nonverbal reprimands were displayed in an effort to terminate an inappropriate behavior. Follow-up data were collected 2, 4, and 12 months after the last intervention session.

Baseline data for the dinner routine revealed that challenging behavior occurred during 41% of the intervals and quickly decreased to a mean of 12% during intervention

and 8% at follow-up. Engagement for the dinner routine improved from a mean of 77% during baseline to 97% during intervention and 100% during follow-up. Baseline data for the family television watching routine revealed that challenging behavior occurred during a mean of 55% of the intervals and decreased to a mean of 18% during intervention and 7% during follow-up. Engagement for the family television watching routine improved from a mean of 18% during baseline to 89% during intervention and 100% during follow-up. Data for the bedtime routine revealed that challenging behavior occurred during a mean of 67% of intervals during baseline, a mean of 5% during intervention, and 0% at follow-up. Engagement increased for the bedtime routine, but means for each phase were not stated. Each routine demonstrated an increase in adult positive interactions from baseline to intervention and negative adult interactions decreased from baseline to intervention.

Buschbacher et al. (2004) concluded that the parent-professional collaborative process of functional assessment and PBS reduced problem behavior, improved meaningful engagements during three typical family-valued evening routines, increased positive parent-child interactions and decreased negative parent-child interactions. Also, the parent-professional collaboration that occurred throughout the entire process increased the likelihood that the interventions would be durable since the intervention procedures were practical and a good contextual fit for the family. Buschbacher et al. researched a comprehensive package of support for the parents to result in a reduction in problem behavior and an increase in engagement. Future research should be conducted to explore whether it is particular interventions or a particular package of behavior interventions that are more effective.

Review and Analysis of Studies Related to Staff and Parent Training

Lowe et al. (2007) conducted a study to evaluate the impact of the introductory level of a newly accredited training program in positive behavioral support on the knowledge and attitudes of direct care staff working in specialist services for people with learning disabilities and challenging behaviors. The three-tiered training approach was to provide professional qualifications for practitioners at all levels in services that support people with challenging behavior. They delivered the training through a combination of teaching and self-instruction, with assessments combining written answers, observation of performance and evidence drawn from the workplace. The topics for each unit were: identify the service mission, promote fundamentals of care, contribute to person centered planning, defining challenging behavior, three-stage intervention model, active support, community profiling, contribute to periodic service review, supervision of support, and foundations of communication. The training was 80 hours of direct teaching across 10 consecutive days in a classroom setting. The training included lectures, videotapes, individual and group work, practical exercises and group discussions, and a comprehensive course book containing all the taught material. The training sessions followed set formats and two trainers were assigned to each session.

The participants attended a 10-day classroom based training that was delivered 14 times to groups of between 18 and 26 staff. Attitude data were collected for 122 staff (52 non-registered and 70 registered nurses). Two-thirds (67%) were female and 82% held full-time posts. The non-registered staff had been in post for an average of 14.2 years and the registered staff an average of 13.7 years.

The data on knowledge was obtained immediately before and after the training for 205 staff. The staff consisted of 101 registered nurses and 104 non-registered staff. They had an average of 12.7 years in post, the majority female (69%) and in full-time posts (84%). The training was also evaluated by participants at the end of each teaching day by completing an evaluation of that day's sessions. The evaluation asked participants to rate clarity of aims and presentation, teaching methods used, value and interest of content, and participant involvement and overall level of delivery.

The scores for registered staff on the confidence in coping with aggression scale showed a significant increase between the test they took at the beginning of the training and the test they took at the end of the training, but it was followed by a significant decrease when they took the test again 1-year later. The mean score remained above the baseline level to suggest a temporary effect. A significant increase was also evident for the non-registered staff between the first and second test and maintained one year later. There were no significant differences in scores between the two staff groups at any of the time periods. Registered staff showed a significant increase in score between the first test and the second test, which was maintained one year later for the confidence in dealing with challenging behavior measure. Non-registered staff showed a more gradual increase, with no significant change at the second test, but with scores a year later representing a significant increase over baseline, but no significant change between the second test and the test that was given one year later. The two staff groups did not differ significantly in score at any of the time periods for the confidence in dealing with challenging behavior.

Registered staff showed no significant change on the fear and anxiety scale or on the depression and anger scale between test one and test two, but showed decreases in scores

on both scales one year later that were significantly lower than the previous two sets of ratings. Non-registered staff showed a similar pattern on the fear and anxiety scale, and their scores a year later were significantly lower than those of the registered staff group. They showed no change over time on the depression and anger scale. The registered staff showed significant gains on all domains in the change in attributions between test one and test two, but scores returned to baseline one year later which indicates only short-lived changes in attributions. Non-registered staff showed a similar pattern with the change in attributions. There were no significant differences between registered and non-registered staff on the change in attributions from test one or test two to baseline, but a year later non-registered staff attributed challenging behavior to learned positive and biomedical factors to a greater extent than did registered staff.

Change in knowledge was assessed by written questions and answers for all participants immediately before and after the two-week teaching block, and again 1 year later. All participants increased their scores between test one and test two. Registered staff showed a change in mean score from 57 to 68 after the teaching block, representing a significant increase at $p < 0.0001$. There were no significant associations between length of service and scores for these staff at either time. Participant evaluation responses were extremely positive with very few staff giving negative ratings on any aspect of the training.

Lowe et al. (2007) concluded that the training was very well received in terms of delivery, style, content and perceived value, but failed to have an impact to effect lasting change on attitudes or theoretical approach. The training had an impact on knowledge for the non registered staff immediately after the training occurred and increased again after

they had had time to work through the course material and complete their assessment portfolios. The researchers state that training is one of the key aspects necessary for high quality service delivery. The researchers note further research should evaluate the impact of training and training approaches on career knowledge and performance together with the impact on the service user experience.

Ingersoll and Dvortcsak (2006) conducted a parent training program for families of preschool-age children with an autism spectrum disorder (ASD) designed for use in public early childhood special education (ECSE) classrooms and described the implementation of this model in a preschool classroom and how teachers were trained to use it. Eight families chose to take part in the training with five attending all group and individual sessions and three attending the majority, but not all of the sessions. The children were 3 or 4 years old and had an educational eligibility of ASD. The parents ranged in age from early 20s to mid-40s and represented a wide range of educational and income levels. The teachers included two early childhood special education teachers, one speech–language pathologist and one occupational therapist. The parent training curriculum focused on teaching families naturalistic intervention techniques to increase their child’s social–communication skills during daily activities and routines. A combination of approaches was chosen because developmental and naturalistic behavioral strategies are compatible and each focuses on improving a different set of skills considered important for young children with autism. Indirect techniques are used during child-directed activities to enhance the parent’s responsivity to their child’s behavior. Direct teaching strategies are derived from naturalistic behavioral interventions.

The parent training program was designed to be conducted once a week over 9 weeks in six group sessions of 1 hour and three individual sessions of 45 minutes each with each parent and child. The group sessions consisted of a presentation, videotaped examples, and group discussion and problem solving. The first session consisted of an initial presentation that reviewed the research on parent training for children with autism, an overview of the intervention techniques parents would be learning, and a description of the parent training program. Parents then developed individual goals for their child with the help of the parent educator. All subsequent sessions began with a 20-minute discussion of the parents' use of the different intervention strategies in the home and then a 60-minute presentation of the next intervention strategies. The individual sessions were 45 minutes and were interspersed with the group sessions. During the session, the parent educator modeled the target techniques with the child for 5 to 10 minutes and then the parent practiced the techniques with his or her child while receiving feedback. A discussion of how to use the techniques in the home to target the child's social-communication goals also took place.

The parent and teacher training occurred together so teachers could have hands-on learning opportunities. These teachers observed the researchers conduct all of the evening group sessions with the parents and were there for the group and individual sessions to assist with goal development, participate in the group problem-solving discussions and to provide feedback.

A pre and post-test of parent knowledge regarding the intervention techniques was administered. The parents received an average score of 29% correct for the pre-test and an average score of 75% correct on the post-test. Parents also completed a satisfaction

survey regarding the program at the end of the training. The overall parent ratings were positive related to the improvements their child made in social engagement and communication skills as a result of the program. The teachers completed a satisfaction survey at the end of the training regarding the parent training program and also had overall positive ratings. The teachers believed that both the participating parents' ability to promote their children's skills at home and the children's engagement and communication skills improved.

Ingersoll and Dvortcsak (2006) noted that even though the training had positive responses only 75% of the families chose to participate at all and only 56% participated in the entire program. Teachers indicated that the home coaching visits decreased their ability to implement the program in future school settings, but the parents found the home visits very helpful. All teachers and one parent reported that more coaching sessions would have resulted in better parent learning. The researchers suggested investigating optimal parent training formats for school programs, in terms of both gains in parent knowledge and teacher implementation. The study only included children with autism and had a small number of students. Each teacher and parent invested 50 hours in this program which was expressed as a concern.

Markey, Markey, Quant, Santelli, and Turnbull (2002) conducted a study to describe a program specifically designed to provide support to families who desperately need research-based information on PBS. The program is offered by Pyramid Parent Training in New Orleans, Louisiana where sixty-two percent of the population is African American. The program components include workshops, roundtables, support groups, best practices luncheons, leadership development, one-to-one assistance, and training of

trainers. The workshops are held in a community setting such as a library or community cultural center that is familiar to the parents and include six lessons presented in a manual, each taking approximately 3 to 4 hours to present. Each workshop begins with a time for introduction and sharing among the parents and the ideas and concepts are introduced through family stories, role plays, and activities designed to encourage the participants to reflect on their own personal and family experiences. The sessions end with some suggested activities for parents to try at home. During the workshop sessions the parents define behavior and discipline in their own words and examine how their definitions may be influenced by cultural or family attitudes that have been passed from generation to generation. The workshop sessions are filled with activities that give parents opportunities to practice new strategies multiple times before trying them at home. The workshops introduce research-based implementation steps of PBS: data collection, completion of the functional assessment, and writing the PBS plan. Small group sessions were offered in addition to the workshops to support the training objectives. Parent support groups offered the opportunity to come together informally with other parents for emotional support and exchange of ideas and information.

Markey et al. (2002) concluded that parents experienced positive outcomes from their participation in the program. The researchers provided a strong model for parent training in PBS, but only provided anecdotal data to support it. Future studies need to examine a quantitative evaluation of the impact of parent participation in the program.

Review and Analysis of Studies Related to Parenting Stress and the Family Context in the Assessment and Treatment Planning Process

DuPaul, Mcgoey, Eckert, and Vanbrakle (2001) conducted a study to examine the behavioral, social, preacademic, and medical functioning of preschool-age children with ADHD relative to a sample of normal peers. There were ninety-four children that participated in the study. The participants were between the ages of 3 and 5. Fifty-eight of these children (50 boys, 8 girls) were identified as having one of the three subtypes of ADHD and thirty-six children (20 boys, 16 girls) were assigned to a normal control group. The dependent variables were the children's behavior at home and school and parent perceptions of parental stress and family functioning.

Direct observations of the child's activity, compliance, noncompliance, inappropriate behavior, and on-task behavior were conducted in a clinic playroom and the preschool classroom for each participant. The behavioral observations of parent-child interactions in a clinic playroom setting consisted of four different controlled situations, each of which was 10 minutes in duration. Direct observations of classroom behavior were conducted in structured and unstructured activities and each were 30-minutes in duration.

Parents and teachers rated problem behavior as being significantly greater for children in the ADHD group relative to normal control children ($p < .001$) and rated social skills as being significantly better for the normal control children relative to children with ADHD ($p < .001$). Parents of children with ADHD indicated more stress and greater family dysfunction relative to the parents of control group children without disabilities. Parents of children with ADHD emitted fewer direct commands and more frequent negative behavior than did control group parents and children with ADHD were

more noncompliant and exhibited more frequent inappropriate behavior than children in the control group. Children with ADHD were found to exhibit greater levels of negative social behavior in unstructured classroom situations compared to structured classroom situations.

DuPaul et al. (2001) concluded that young children with ADHD exhibited more problem behavior and were less socially skilled than their peers without disabilities. They also noted that adult perceptions of child behavior may be negatively biased because of the stress associated with managing a child with ADHD. Parents of children with ADHD reported higher levels of stress associated with child behavior and dysfunctional interactions than did control parents. Future research should focus on the development of empirically sound approaches to early intervention for the problems faced by young children with ADHD and their families. The researchers noted that the gender ratio was different between groups, so differences may have been due to gender rather than diagnostic status.

Moes and Frea (2002) conducted a study to investigate how specific variables pertaining to family context (i.e., care giving demands, family support, patterns of social interaction) could be used to individualize functional communication training (FCT) treatment packages and support family use of FCT within important family routines. Three participants and their families participated in this study. Participant 1 was a 3 year old girl diagnosed with autistic disorder. Her problem behaviors were characterized by hitting, pinching, pushing, crying, screaming, eloping, dropping to the ground, and throwing objects. Participant 2 was a 3 year old boy diagnosed with high-functioning autism. His problem behaviors were characterized by hitting, pushing, crying, screaming,

throwing, banging and grabbing for objects, and dropping to the ground. Participant 3 was a 3 year old boy diagnosed with autism. His problem behaviors consisted of hitting, pushing, crying, whining, grabbing for and pushing away objects, and banging on furniture. The study took place in the participants' homes and was implemented by family members with ongoing consultation from the two researchers. Families were seen once or twice a week during assessment and intervention phases of the study, and then once every 2 months during follow-up probes for 1 year after training was completed.

Training was conducted on specific routines that parents identified as problematic. The routines for Participant 1 were a play routine and a walk routine. The routines for Participant 2 were outside and inside play routines. The routines for Participant 3 were the dinner and shopping routine. Frequency and duration data were recorded using a software program from videotapes of the sessions. The dependent variables measured for each participant were percent of 10-second intervals with problem behaviors, percent of 10-second intervals with functional communication, and an index of the treatment package's fit with family context. Problem behavior was either aggression or disruption. Functional communication was parent- or sibling-prompted and unprompted oral words or signs that were either taught to the children as part of an FCT treatment package or identified by parents as an appropriate communication response to request access to preferred items/activities. Parents also evaluated how well the treatment package fit within their family context using a questionnaire.

A multiple baseline design across participants was implemented. The four phases were baseline, FCT, contextualized FCT, and follow-up. Observations were conducted in multiple routines across each phase. During baseline, high levels of problem behavior and

no functional communication were observed for each participant across specified routines. Problem behavior decreased and functional communication increased when FCT was introduced into those routines selected for training. During the contextualized FCT, problem behaviors were eliminated completely or reached near zero levels and functional communication continued to show an increasing trend within routines in which training was conducted. Follow-up probes indicate reductions in problem behavior and increased use of functional communication was maintained in both training routines and generalization probes. The self-report questionnaire ratings of the sustainability of the intervention packages showed an increase following modifications made during the contextualized FCT phase.

Moes and Frea (2002) concluded that the effect of contextualizing an existing functional communication training treatment package in the home was not only compatible with FCT but also was a valuable component for the families involved. The assessment of the families' home environments, values, beliefs, and goals related to daily routines and cultural factors demonstrated that a behavioral intervention can be adapted to incorporate the individual needs of families. Adaptations were generated in collaboration with the families that focused on responding to the care giving demands, family support, and social interactions that characterized their daily routines. Future research should be designed to take a closer look at the value of the home environment.

Review of Literature Summary

Based on this review, the family-focused PBS process should include person-centered planning and team building, comprehensive functional assessment, hypothesis

development, comprehensive support plan development, and lastly implementation of the support plan and outcomes measurement (Becker-Cottrill et al., 2003; Buschbacher & Fox, 2003; Marshall & Mirenda, 2002). The parent-professional collaboration of the PBS process increased engagement and reduced challenging behaviors across two independent contexts in a community inclusive preschool setting (Duda et al., 2004). Lucyshyn et al. (2007) found that positive behavior support in families of children with developmental disabilities decreased problem behavior and increased participation in routines. They also found that the family-centered positive behavior support is cost-effectiveness in the long term. Parent-professional collaborative PBS process also increased positive parent-child interactions and decreased negative parent-child interactions (Buschbacher et al., 2004).

Staff training in the PBS process for direct care staff working in specialist services for people with learning disabilities and challenging behaviors was well received in terms of delivery, style, content and perceived value, but failed to have lasting change on attitudes or theoretical approach (Lowe et al., 2007). Parent training for families of preschool-age children with an autism spectrum disorder (ASD) had positive responses, but only 75% of the families chose to participate at all and 56% participated in the entire program. Parents found that home visits and coaching sessions were very helpful (Ingersoll & Dvortcsak, 2006). Moreover, parent training on PBS has the potential to result in positive outcomes for individuals with behavior issues (Markey et al., 2002).

DuPaul et al. (2001) concluded that parents of children with ADHD indicated more stress and greater family dysfunction relative to the parents of control group children without disabilities. DuPaul et al. (2001) also found that young children with ADHD exhibited more problem behavior and were less socially skilled than their peers without

disabilities. They also noted that adult perceptions of child behavior may be negatively biased because of the stress associated with managing a child with ADHD. Parents of children with ADHD reported higher levels of stress associated with child behavior and dysfunctional interactions than did control parents. Moes and Frea (2002) found that contextualizing specific variables pertaining to family context (i.e., care giving demands, family support, and patterns of social interaction) may be a valuable component for the families involved.

The results of this review of the literature lead to the following conclusions. First, collaborative parent-professional PBS processes are effective in reducing challenging behaviors in children with developmental disabilities in the preschool and home settings across family-valued routines. Second, staff and parent trainings in PBS may result in positive outcomes, but follow-up support may be needed to maintain the changed behavior and reduce the dropout rate among parents who attended initial training sessions. Third, parents of children with ADHD may experience high levels of stress associated with child behavior and dysfunctional interactions. Fourth, contextual fit during the intervention decreases challenging behavior. Fifth, research that includes quantitative data related to the reduction of challenging behaviors after collaborative parent-professional training is quite limited. Based on these conclusions it is evident that more research is required on the collaborative parent-professional PBS parent training process, the effect the parent PBS training has on challenging behaviors, and parental stress with other developmental disabilities.

CHAPTER 3

METHODOLOGY

The purpose of the study was to investigate the effects of a collaborative parent-professional positive behavior support (PBS) team training on challenging behaviors of children with autism. The study was designed to answer one research question (i.e., Does collaborative parent-professional PBS team training result in a decrease in child challenging behavior within the home environment?). This chapter contains a detailed description of the methodology used in this study. The chapter begins with a description of the participants and data related to the parent-child systems associated with the participants. Next, the target behaviors for each participant are identified and defined. Then, a brief description of the research setting is provided followed by discussion related to materials and data collection measures. The remainder of the chapter focuses on the design, research procedures (i.e., preparation, baseline, training session, data collection, interobserver agreement), and treatment of the data.

Participants

Participants for this study were recruited through the Center for Autism Spectrum Disorder's listserv and website, the Desert Regional Center Autism Program, and Nevada Early Intervention Services. The Desert Regional Center Autism program is a family-centered program operated by the state of Nevada serving Southern Nevada. Nevada Early Intervention Services is the state agency responsible for serving infants and toddlers at risk for or who have developmental delays. The criteria for selection to participate in this study were: (a) the child was between 2 – 10 years of age, (b) the child had a medical and/or educational diagnosis of an autism spectrum disorder, (c) the child

engaged in at least three challenging behaviors that created a significant barrier to participation in family life, school, work, or community activities, and (d) the parent and a professional that worked with the child (e.g., teacher, speech therapist, occupational therapist, home behavioral therapist, or any individual providing related service to the child) were willing to attend a collaborative parent-professional PBS team training.

Table 1 displays the demographic data for each participant. Participant 1 was an 8-year-old boy dually diagnosed with high functioning autism and attention-deficit hyperactivity disorder (ADHD). He was taking one medication twice a day and another medication once a day. His intake of medication was monitored throughout the study. He attended public school and was in a general education classroom for the majority of the day. His challenging behaviors were characterized by crying, yelling, eloping, dropping to the ground, and throwing objects. The challenging behaviors occurred while he was eating dinner, completing his homework and cleaning up his toys at the end of the day. The second participant was a 7-year-old boy diagnosed with asperger's disorder. He was not taking any medication throughout the study. He is home-schooled through an accredited distance education school. His challenging behaviors were characterized by dropping to the ground, crying, whining, hitting, throwing and pushing away objects. The challenging behaviors occurred while he was completing his homework and cleaning up his toys after he was done playing with them.

Parent-Child System Data

Child characteristics, parent characteristics, family context, and life stress of the parent-child system was assessed using the Parent Stress Index (PSI) (Abidin, 1995).

Table 1

Participant Demographics

| | Age | Ethnicity | Diagnosis | Parent Who Attended Training | Professional |
|---------------|-----|-----------|--------------------------------------------------------------------------------------|------------------------------------|--------------------------|
| Participant 1 | 8 | White | High Functioning Autism/ Attention- Deficit Hyperactivity Disorder | Mother | Clinical Psychologist |
| Participant 2 | 7 | White | Asperger's Disorder | Father | Teacher |

The PSI is an instrument that identifies parent-child systems that are under stress and at risk for the development of dysfunctional parenting behaviors or behavior problems in the child involved (Abidin, 1995). The PSI was administered once before the PBS team training and again after data collection was complete to yield a measure of the relative magnitude of stress in the parent-child system. These data were collected to supplement the demographic data of the participants and to provide a context related to the family dynamics of those who participated in this study. The Child Domain subscale included the parent's perception of the impact of a given unreliable characteristic on the parent and a child behavior (Abidin, 1995). The Parent Domain subscale is used to examine some of the principal parent characteristic and family context variables that have been identified as those which have an impact on the parent's ability to function as a competent caregiver to their child (Abidin, 1995). Data suggests that fathers' earn lower stress scores on many PSI scores when compared to mothers'. The normal range for scores is within the

15th to 80th percentiles and high scores are considered to be at or above the 85th percentile (Abidin, 1995).

Table 2 summarizes the PSI scores for Participant 1 and 2 across the Child Domain subscales and the Parent Domain subscales. The Total Stress score (raw score, pre 324, post 302) indicates that intervention is necessary or appropriate for the parent-child system of Participant 1. The Pre- and Post- PSI Child Domain score (raw score, pre 174, post 161) for Participant 1 was elevated in comparison to the Parent Domain score (raw score, pre 150, post 141) and life stress score (raw score, pre 10, post 8) which indicates the child characteristics are major factors in contributing to the overall stress in the parent-child system and this usually occurs at the extreme when the child is hyperactive and has behavioral disorders. The PSI showed high scores for Participant 1 in Distractibility/Hyperactivity subscale (raw score, pre 38, post 39), Adaptability (raw score, pre 51, post 43), Demandingness (raw score, pre 32, post 31), Mood (raw score, pre 13, post 13), and Acceptability (raw score, pre 23, post 24). High scores in these subscales indicate that the child displays behavior associated with ADHD, the child makes parenting tasks more difficult because of the inability to adjust to changes in the environment, the child places many demands on the parent, the child's affective functioning shows evidence of dysfunction, and the child possesses physical, intellectual, and emotional characteristics that do not match the expectations the parent has for the child. The Reinforces Parent subscale had a high score (raw score, pre 17) before the intervention, but decreased to normal levels (raw score, post 11) after the intervention was complete which indicates the parent did not experience her child as a source of

positive reinforcement before the intervention, but does experience her child as a source of positive reinforcement after the intervention was complete.

The parent of Participant 1 earned a high score in the Parent Domain (raw score, pre 150, post 141) before and after intervention was complete which indicates the parent feels overwhelmed and inadequate related to the task of parenting. High scores were also earned in the Competence (raw score, pre 37, post 36), Role Restriction (raw score, pre 25, post 26), and Spouse (raw score, pre 33, post 31) subscale which indicates the parent feels a lack of acceptance and criticism from the child's other parent, the parent sees himself or herself as being controlled and dominated by their child, and the relationship between the mother and the child's father is generally negative and lacks the mutual support in the area of child care. Normal scores were earned before and after intervention in the Isolation (raw score, pre 11, post 9), Attachment (raw score, pre 11, post 10), Health (raw score, pre 9, post 9), and Depression (raw score, pre 24, post 20) subscales. The Life Stress score (raw score, pre 10, post 8) was in the normal range for the parent of Participant 1.

The Total Stress score (raw score, pre 305, post 287) indicates that intervention is necessary or appropriate for parent-child system of Participant 2. The Pre- and Post- PSI Child Domain score (raw score, pre 152, post 142) for Participant 2 was not elevated in comparison to the Parent Domain score (raw score, pre 153, post 145) and life stress score (raw score, pre 11, post 8) which indicates the child characteristics are not a major factor in contributing to the overall stress in the parent-child system. The PSI showed high scores for Participant 2 in Adaptability (raw score, pre 39, post 33), Reinforces Parent (raw score, pre 23, post 19), Demandingness (raw score, pre 25, post 24), Mood

(raw score, pre 19, post 16), and Acceptability (raw score, pre 22, post 19). High scores in these subscales indicate that the child makes parenting tasks more difficult because of the inability to adjust to changes in the environment, the parent does not experience her child as a source of positive reinforcement, the child places many demands on the parent, the child's affective functioning shows evidence of dysfunction, and the child possesses physical, intellectual, and emotional characteristics that do not match the expectations the parent had for the child. The Distractibility/Hyperactivity subscale (raw score, pre 28, post 31) had normal range scores before intervention, but increased to a high score after intervention was complete. This could indicate that the child displays behavior associated with ADHD.

The parent of Participant 2 earned a high score in the Parent Domain (raw score, pre 153, post 145) before the intervention, but was in the normal range after the intervention was complete which indicates the parent felt overwhelmed and inadequate to the task of parenting before the intervention. High scores were also earned in the Attachment (raw score, pre 20, post 20) and Role Restriction (raw score, pre 28, post 26) subscale before and after intervention was complete which indicates that the parent feels an inability to observe and understand the child's feelings and/or needs accurately and the parent sees himself or herself as being controlled and dominated by their child. Depression (raw score, pre 28, post 22) and Spouse (raw score, pre 23, post 21) subscale earned high scores before the intervention, but earned scores in the normal range after the intervention was complete which indicates the parent may have felt depressed or had feelings of dissatisfaction with self and life circumstances and the relationship between the mother and the child's father was generally negative and lacked the mutual support in the area of

child care before the intervention, though, improved after the intervention was complete. Normal scores earned before and after the intervention was complete were in the Competence (raw score, pre 28, post 27), Isolation (raw score, pre 15, post 16), and Health (raw score, pre 11, post 13) subscales. The Life Stress score (raw score, pre 10, post 8) was in the normal range for the parent of Participant 2.

Target Behaviors

Participant 1 target behaviors were out of chair while eating dinner, prompts to begin homework, and off task while cleaning up his toys at the end of the day. The first target behavior, out of chair while eating dinner, was defined as bottom leaving the chair. Examples of leaving his chair included getting up to see what was on the television, hiding under the table or leaving the table when he was done eating, but his mother had not finished eating. The second target behavior, prompts to begin homework, was defined as the number of times his mother had to ask him to start his homework. Examples of prompts included, “What does question 1 say?” “Let’s work on your math homework” “Write your name on the worksheet”. The third target behavior, off task while cleaning, was defined as the number of times picking up toys was interrupted (due to various distractions) prior to task completion. Examples of interruptions were watching television, playing with the toys, and playing with the pillows and blankets on the couch.

Participant 2 target behaviors were off task while cleaning up his toys after he was done playing with them, prompts to begin homework, and time required for homework completion. The first target behavior, off task while cleaning, was defined as the number of times picking up toys was interrupted (due to various distractions) prior to task completion. Examples of interruptions were watching television, and playing with the

Table 2

Summary of the PSI Scores for Participant 1 and 2 across the Child Domain Subscales and the Parent Domain Subscales

| Measure | Participant 1 Raw Score | | | | Participant 2 Raw Score | | | |
|-----------------------------------|----------------------------|-----|------|-----|----------------------------|-----|------|-----|
| | Pre | % | Post | % | Pre | % | Post | % |
| Child Domain | 174 | 99+ | 161 | 99+ | 152 | 99+ | 142 | 98 |
| Distractibility/ Hyperactivity | 38 | 99+ | 39 | 99+ | 28 | 80 | 31 | 90 |
| Adaptability | 51 | 99+ | 43 | 99+ | 39 | 96 | 33 | 95 |
| Reinforces Parent | 17 | 98 | 11 | 80 | 23 | 99+ | 19 | 99+ |
| Demandingness | 32 | 99+ | 31 | 99+ | 25 | 95 | 24 | 90 |
| Mood | 13 | 90 | 13 | 90 | 19 | 99+ | 16 | 96 |
| Acceptability | 23 | 99+ | 24 | 99+ | 22 | 99+ | 19 | 96 |
| Parent Domain | 150 | 87 | 141 | 79 | 153 | 90 | 145 | 83 |
| Competence | 37 | 90 | 36 | 86 | 28 | 45 | 27 | 40 |
| Isolation | 11 | 30 | 9 | 15 | 15 | 75 | 16 | 80 |
| Attachment | 11 | 30 | 10 | 25 | 20 | 96 | 20 | 96 |
| Health | 9 | 20 | 9 | 20 | 11 | 50 | 13 | 70 |
| Role Restriction | 25 | 86 | 26 | 90 | 28 | 94 | 26 | 90 |
| Depression | 24 | 80 | 20 | 50 | 28 | 91 | 22 | 70 |
| Spouse | 33 | 99+ | 31 | 99+ | 23 | 90 | 21 | 80 |
| Total Stress | 324 | 99+ | 302 | 96 | 305 | 96 | 287 | 92 |
| Life Stress | 10 | 70 | 8 | 60 | 11 | 75 | 8 | 60 |

toys. The second target, prompts to begin homework, was defined as the number of times his father had to ask him to start his homework. Examples of prompts were, “Come on, let’s get started” “What is the answer to question 1?” “Start writing answer 1”. The third target, time required for homework completion, was defined as the amount of time

between initiation of the first written homework response and completing the last written homework response.

Setting

The training took place within a continuing education classroom at a large metropolitan university located in the Southwestern United States. This location was selected due to its easy public access and ample parking. All treatment sessions were conducted in the family homes of the individual participants. The parent implemented the treatment after finishing the PBS team training. The parent and child worked one-on-one in the home.

Materials and Data Collection Measures

Materials

Training materials included a PowerPoint presentation (see Appendix A), video examples, active participation exercises, and take home packets including worksheets and handouts. Session materials were selected at the family home and were consistent with the selected target behaviors and associated routines. For example, the family's utensils and plates were used for mealtime routines and toys and games were used during play activities. The same materials were used across observations.

Direct Observation Measures

Direct observation measures were used during baseline and intervention sessions within the respective home settings of the two participants. The direct observation measures included frequency count and duration data collection procedures. The frequency count procedure involved recording a tally mark each time the target behavior was emitted within the observational period. The duration data collection procedure

involved recording the start and end time of the target behavior and then determining the total duration time.

Social Validity Measures

Participant perceptions of the PBS team training procedures and behavioral outcomes were assessed at the completion of the study to evaluate the social validity of the training procedures and outcomes. PBS Team Training Participant Questionnaire was constructed with a 5-point Likert-type scale to assess parents' and professionals' satisfaction with the presenters, knowledge and skills obtained and training components (see Appendix B). These self-report data were examined for further validation of the practical relevance of the intervention.

Design

A multiple-baseline across behaviors single subject research design (Alberto & Troutman, 2009) was used to examine the functional relationship between the collaborative parent-professional PBS team training and challenging behaviors of children with autism. There was one baseline condition and one intervention condition administered sequentially across each of the behaviors. During baseline condition, the child's behaviors were observed but the behaviors were not addressed. During the intervention condition, the child's challenging behaviors were observed while receiving positive reinforcement for the replacement behaviors.

Baer, Wolf, and Risley (1968) developed the multiple-baseline across behaviors design. In this design, concurrent measurement of two or more behaviors of a single participant in a single setting takes place (Cooper et al., 2007). After stable responding has been obtained under baseline conditions, the investigator applies the independent

variable to one of the behaviors while maintaining baseline conditions for the other behavior(s) (Cooper et al., 2007). When a stable performance has been reached for the first behavior, the independent variable is applied to the next behavior (Cooper et al., 2007). If each baseline shows changes in the child's challenging behavior upon the introduction of the intervention, then these changes can be attributed to that intervention. The design allows for comparisons between the child's challenging behavior receiving the intervention and the child's challenging behavior that has not yet been exposed to intervention.

The design is particularly appropriate for establishing the functional relationship between an independent variable and a dependent variable. Also, the design does not require treatment withdrawal to demonstrate the effects of the intervention, so it can be used when behavior change may not be reversible (Cooper et al., 2007). Intervention effects on the challenging behavior may not be reversible once the child is taught a replacement behavior.

Specifically, the level, trend, and variability of the dependent measures are evaluated within and across conditions across all tiers of the multiple-baseline across behaviors design. Visual inspection of graphed data provides valuable information related to intervention effects.

Description of Preparation and Baseline Procedures

Preparation

Approval to conduct this study was obtained from the Institutional Review Board at the university where the research took place. After approval was obtained, a meeting took place between the researcher and potential study participants to obtain informed consent,

and discuss data collection procedures. These procedures were explained verbally and in writing to potential participants. After consent had been given, participants and the researcher discussed what behaviors were of concern and decided on three challenging behaviors that would be targeted for the study. Although no identifying information was provided to the participants during training, the information garnered from the initial meeting was used to construct meaningful role-plays and training examples. This process ensured a level of general case programming (Stokes & Baer, 1977) used to enhance generalization of concepts and skills taught during training. This step informed the contextual nature of this concise training intervention.

The second component of preparation was training the research assistant related to the data collection procedures for the purposes of determining interrater reliability and fidelity of treatment. The training session took one-hour and involved the researcher demonstrating the data collection procedures. After the researcher's demonstration, the research assistant watched premade training videotapes of non-participant children and parents implementing an intervention and practiced recording the children's behavior using the data collection procedures until the research assistant reached a 90% criterion.

Baseline Procedures

The purpose of the baseline condition was to examine the frequency of the challenging behavior and the alternative behavior before the treatment began. During baseline, the researcher collected data on the frequency or duration of the challenging behavior in the home environment. The researcher watched the child engage or not engage in the challenging behavior for one hour in the home for four sessions per week. There were no consequences or schedules of reinforcement for inappropriate or incorrect

behavior during baseline. After three sessions, the data were analyzed to determine if there was stability in the baseline data (i.e. no accelerating or decelerating trends). Because stability was evident, the treatment condition began for the first challenging behavior. Baseline data were recorded in the home using the data collection sheets (see Appendix C). Data were collected related to three behavioral challenges within a time frame consistent with a multiple-baseline across behaviors design. Baseline was implemented before the PBS team training took place.

Description of Training Session Intervention Procedures

The training session intervention used in this study consists of direct and explicit training objectives that are carefully sequenced within an evidenced-based skills training model. Training was delivered using parent-friendly materials and taught using evidenced-based active participant response strategies (Heward et al., 2005; Heward, 2009). The training materials and content delivery included an outcomes-based problem solving approach (Good et al., 2007) delivered in one, 7-hour training day (see Appendix D for an outline of the training session). The training was delivered in a one, 7-hour day because previous trainings at the Center for Autism Spectrum disorders (CASD) had been conducted over multiple sessions and the drop-out rate was high. The innovative Contextual Problem-Solving Parent Training Model is designed to (a) support the acquisition, (b) promote the fluency, and (c) enhance the generalization and maintenance of a contextual problem-solving framework specifically designed to address challenges associated with parenting children on the autism spectrum.

The first training objective was to teach parents to identify and define a family problem as an indication of a family value (Moes & Frea, 2002). For example, a

challenge for a parent might be a child's unwillingness to participate in family routines; the value identified by the parent's expressed problem can be conceptualized as a family value (e.g., participation is important and is valued). This step in the contextual problem-solving framework allows parents to identify and connect to the "why" behind parent and child behavior change. A second objective was to teach parents to engage in a process of more effective observation of self, child, and family (Buschbacher et al., 2004).

Specifically, this objective included (a) teaching parents how to collect all the information available to them within the family context, (b) helping parents prioritize areas to target for change, and (c) showing parents how to identify and, if appropriate, eliminate unnecessary information including negative thoughts, such as "I am a bad parent because I can't control my child."

A third training objective was to teach the family how to see the whole picture (i.e. behavior in context) and create a plan for change through a step-by-step solution planning process (Buschbacher & Fox, 2003). Activities designed to meet this objective included supporting parents as they identify the who, what, how many, where, when, and how that are needed for behavior change while remaining connected to previously identified values (i.e., goals). Additional activities associated with this objective included generating solutions to parenting challenges within a four-term contingency (i.e., antecedent, behavior, consequence, and setting event) and within a competing behaviors pathway-like diagram (adapted from O'Neill, Horner, Albin, Sprague, Storey, & Newton, 1997).

A final training objective included the careful evaluation of the selected behavior change plan through an informal noticing and data based decision-making process

(Buschbacher & Fox, 2003). Parents were coached through this contextual problem-solving framework by the trainers and through the use of relevant examples and non-examples (i.e. some of which were previously identified through the initial meeting process and some aligned with evidence-based parenting practice examples such as active participant response strategies, researcher-designed guided worksheets, and video clips).

During the training a PBS Team Training Checklist (see Appendix E) was used by the presenter of the training. The checklist had the objectives that the presenter needed to address during the one-day training in sequential order. During the training break, the presenter went through the checklist and marked the box and wrote her initials next to the objective if it was addressed and mastered. If the objective was not addressed and mastered during the first half of the training, the presenter addressed it in the second half. The remaining objectives were checked at the end of the training and addressed if not mastered.

Description of Home Data Collection Procedures

Data collection for Participant 1 occurred four days a week (Monday through Thursday) at 5:30 p.m. each night. Upon arrival at the home of Participant 1, the researcher set up the video camera in the kitchen so each behavior could be recorded for the purpose of determining reliability. This video setup took place as the parent finished preparing dinner. Once dinner was completed the researcher sat next to the table to take data on the frequency of out of chair while eating dinner. After dinner was complete, Participant 1 helped clear the table so he could begin his homework. The parent and child sat at the table while they ate dinner and completed homework. The researcher stayed in the same seat because homework was done at the same table used for dinner. Data were

taken on the frequency of prompts to begin homework. Once all the homework was completed, Participant 1 moved into the living room to clean up the toys he had been playing with throughout the day. The parent followed Participant 1 into the living room and helped guide him in what needed to be cleaned up. The researcher moved the video camera to the living room and stood behind it to collect data on the frequency interruptions (i.e., distractions) while cleaning up his toys. Each session lasted for 1-hour. At the end of each session the researcher packed up the video camera and data collection materials to leave.

Data collection for Participant 2 occurred four days a week (Monday through Thursday) at 1:30 p.m. each day. The researcher set up the video camera so each behavior could be recorded for the purpose of determining reliability. This video setup took place while Participant 2 finished eating lunch. Once he finished eating, Participant 2 went to the living room to clean up toys that he had played with before lunch. The parent was in the living room to help guide him on what needed to be cleaned up. The video camera was placed in the living room and the researcher stood behind it to collect data on the frequency of interruptions (i.e., distractions) while cleaning up his toys. After he finished cleaning up his toys, Participant 2, his father and the researcher moved into an adjacent room off of the living room where there was a computer desk used for homework completion. The researcher moved the video camera into the room and sat at a table that was behind the computer desk so data could be taken on prompts to begin homework and time required for homework completion. The parent sat in a chair next to the computer desk and to the side of Participant 2. Each session lasted for 1-hour. At the end of each session the researcher packed up the video camera and data collection materials to leave.

Interobserver Agreement (IOA)

Interobserver agreement was assessed for 33.7% of the home-based sessions. The researcher collected data in the home related to occurrences and non-occurrences of target behavior and the research assistant watched videotapes of the sessions to collect data for reliability. Interobserver agreement was calculated using the point-by-point agreement ratio in which the number of agreements is divided by the number of agreements plus disagreements and multiplied by 100 (Kazdin, 1982). The interobserver agreement data across each condition for Participant 1 are summarized in Table 3. The column labeled “Percentage of Total Sessions” displays the number and percentage of interobserver agreement sessions for each phase of the study. Interobserver agreement data were collected for 6 of 20 (30.0%) baseline sessions and 9 of 25 (36.0%) intervention sessions. There were a total of 45 observation sessions for Participant 1 in the study of which 15 (33.3%) were scored for interobserver agreement. The columns labeled “Behaviors” display the interobserver agreement for behaviors 1 to 3, averaged across each condition. Mean interobserver agreement for Behavior 1 was 100%. Mean interobserver agreement for Behavior 2 was 87.6% (range, 60.0 to 100%). Mean interobserver agreement for Behavior 3 was 87.3% (range, 66.7 to 100%).

The far right column of Table 3 displays the average percentage of interobserver agreement across each condition of the study. Mean interobserver agreement was 91.3% for baseline and 91.9% for intervention. Mean interobserver agreement for all conditions was 91.6% (range, 60 to 100%).

The interobserver agreement data across each condition for Participant 2 are summarized in Table 4. The column labeled “Percentage of Total Sessions” displays

Table 3

Interobserver Agreement for Participant 1

| Condition | Percentage of Total Sessions | Behaviors | | | Mean |
|--------------|------------------------------------|-----------|----------|------------|----------|
| | | 1 | 2 | 3 | |
| Baseline | 30 | 100 | 88.95 | 84.8 | 91.3 |
| Intervention | 36 | 100 | 86.7 | 88.9 | 91.9 |
| Grand Mean | 33.3 | 100 | 87.6 | 87.3 | 91.6 |
| Range | | | 60 - 100 | 66.7 - 100 | 60 - 100 |

the number and percentage of interobserver agreement sessions for each phase of the study. Interobserver agreement data were collected for 8 of 24 (33.3%) baseline sessions and 12 of 35 (34.3%) intervention sessions. There were a total of 59 observation sessions for Participant 2 in the study of which 20 (33.9%) were scored for interobserver agreement. The columns labeled “Behaviors” display the interobserver agreement for behaviors 1 to 3, averaged across each condition. Mean interobserver agreement for Behavior 1 was 89.98% (range, 77.8 to 100%). Mean interobserver agreement for Behavior 2 was 84.6% (range, 50.0 to 100%). Mean interobserver agreement for Behavior 3 was 97.1% (range, 83.3 to 100%).

The far right column of Table 4 displays the average percentage of interobserver agreement across each condition of the study. Mean interobserver agreement was 90.8% for baseline and 90.4% for intervention. Mean interobserver agreement for all conditions was 90.6% (range, 50 to 100%).

Table 4

Interobserver Agreement for Participant 2

| Condition | Percentage of Total Sessions | Behaviors | | | Mean |
|--------------|------------------------------------|------------|----------|------------|----------|
| | | 1 | 2 | 3 | |
| Baseline | 33.3 | 89.4 | 83.7 | 98.8 | 90.8 |
| Intervention | 34.3 | 90.3 | 85.2 | 95.8 | 90.4 |
| Grand Mean | 33.9 | 89.98 | 84.6 | 97.1 | 90.6 |
| Range | | 77.8 - 100 | 50 - 100 | 83.3 - 100 | 50 - 100 |

Procedural fidelity was assessed using the PBS Team Training Procedural Fidelity Checklist (see Appendix F). The PBS Team Training Procedural Fidelity Checklist was completed for 100% of the intervention sessions for Participant 1 and Participant 2. Immediately following each session the checklist was completed by the researcher. Reliability data for the procedural fidelity checklist were collected for 36% of the intervention sessions for Participant 1 and 34.3% of the intervention sessions for Participant 2 by having the research assistant complete the checklist.

Table 5 displays a summary of the procedural fidelity checklist. Data are represented as a percentage of agreement between the researcher and research assistant across behaviors for each participant for all phases of the study. The columns labeled “Behaviors” display the procedural fidelity agreement for behaviors 1 to 3 across each condition for each participant. Mean procedural fidelity agreement for all behaviors was 100% for intervention sessions for Participant 1 and Participant 2.

Table 5

Procedural Fidelity Agreement for Participant 1 and 2

| Condition | Percentage of Total Sessions | Behaviors | | | Mean |
|-------------------------------|------------------------------------|-----------|-----|-----|------|
| | | 1 | 2 | 3 | |
| Baseline | 0 | N/A | N/A | N/A | N/A |
| Intervention Participant 1 | 36 | 100 | 100 | 100 | 100 |
| Intervention Participant 2 | 34.3 | 100 | 100 | 100 | 100 |
| Grand Mean | 35 | 100 | 100 | 100 | 100 |

Treatment of Data

Question 1: Does collaborative parent-professional PBS team training result in a decrease in child challenging behavior within the home environment?

Analysis: The data from the child's challenging behavior were displayed on a graph and analyzed using visual analysis. The level, trend, and variability of data were analyzed for every behavior. Descriptive statistics were also obtained using SPSS 15.0 version.

CHAPTER 4

RESULTS

Presented in this chapter are the results of the study. The purpose of the study was to investigate the effects of a collaborative parent-professional positive behavior support (PBS) team training on challenging behaviors of children with autism. One research question was answered in this study. This chapter begins with a brief summary of data collection sessions for each participant during the baseline and intervention conditions of the study. Then the research question is related and the data analysis procedures that were used to answer the question as well as the results obtained are reported. Next, results related to social validity are shared. Finally, a summary of findings is provided.

Summary of Data Collection Sessions

Baseline

Baseline sessions were staggered for each behavior according to the multiple-baseline across behaviors single subject research design (Alberto & Troutman, 2009). For Participant 1, Behavior 1 received three baseline sessions. Behavior 2 received six baseline sessions and Behavior 3 received eleven baseline sessions. The criteria for progressing to intervention were (a) a minimum of three data points and (b) data did not demonstrate a significant trend in the direction of improvement (decreasing). During baseline for Participant 1, all of the target behaviors were exhibited at very high levels.

For Participant 2, Behavior 1 received three baseline sessions. Behavior 2 received eight baseline sessions and Behavior 3 received thirteen baseline sessions. The criteria for progressing to intervention were (a) a minimum of three data points and (b) data did not

demonstrate a significant trend in the direction of improvement (decreasing). During baseline for Participant 2, all of the target behaviors were exhibited at very high levels.

Intervention

The number of sessions varied for each behavior as a function of the multiple-baseline across behaviors single subject research design (Alberto & Troutman, 2009). The total number of intervention sessions for Participant 1 was twelve for Behavior 1, nine for Behavior 2, and four for Behavior 3. The total number of intervention sessions for Participant 2 was sixteen for Behavior 1, twelve for Behavior 2, and seven for Behavior 3.

During intervention, there was an overall decrease in the target challenging behaviors from baseline. Results for the challenging behaviors of Participant 1 and Participant 2 are reported in relation to the research question.

Research Question and Related Findings

Question 1: Does collaborative parent-professional PBS team training result in a decrease in child challenging behavior within the home environment?

Visual analysis of data, plotted in line graph format per the parameters of a multiple baseline across behaviors design, was used to answer this research question. Analysis related to Participant 1 is discussed first and then analysis related to Participant 2 is provided.

Participant 1 Results

For Participant 1, visual analysis of baseline and intervention data across three challenging behaviors indicates that the parent-professional PBS team training resulted in

decreased frequencies for each of the target behaviors (see Figure 1). Positive outcomes emerged with regard to level, trend and variability.

The baseline mean for Behavior 1 was 9.7 (range, 9-10) times out of his chair while eating dinner. The intervention mean was 2.6 (range, 2-5) times out of his chair while eating dinner. There was an immediate and substantial decrease in level following the intervention (i.e., training session). The intervention data trend was neither ascending nor descending, but instead revealed a relatively flat trend with slight variability.

The baseline mean for Behavior 2 was 31.3 (range, 30-33) prompts to begin homework. The intervention mean was 4.1 (range, 1-17) prompts to begin homework. There was an immediate and substantial decrease in level following the intervention (i.e., training session). The intervention data revealed an initial descending trend that leveled off and remained flat with little variability.

The baseline mean for Behavior 3 was 32.6 (range, 24-35) distractions while cleaning up his toys at the end of the night. The intervention mean was 1.5 (range, 1-3) distractions while cleaning up his toys at the end of the night. There was an immediate and substantial decrease in level following the intervention (i.e., training session). The intervention data trend was neither ascending nor descending, but instead revealed a flat trend with little variability.

Thus, for Participant 1, there was a clear decrease in frequency for the three target behaviors immediately following introduction of the intervention (see Table 6). Based on these results, a functional relationship between the independent and dependent variable was established.

Figure 1: Participant 1 Target Behaviors

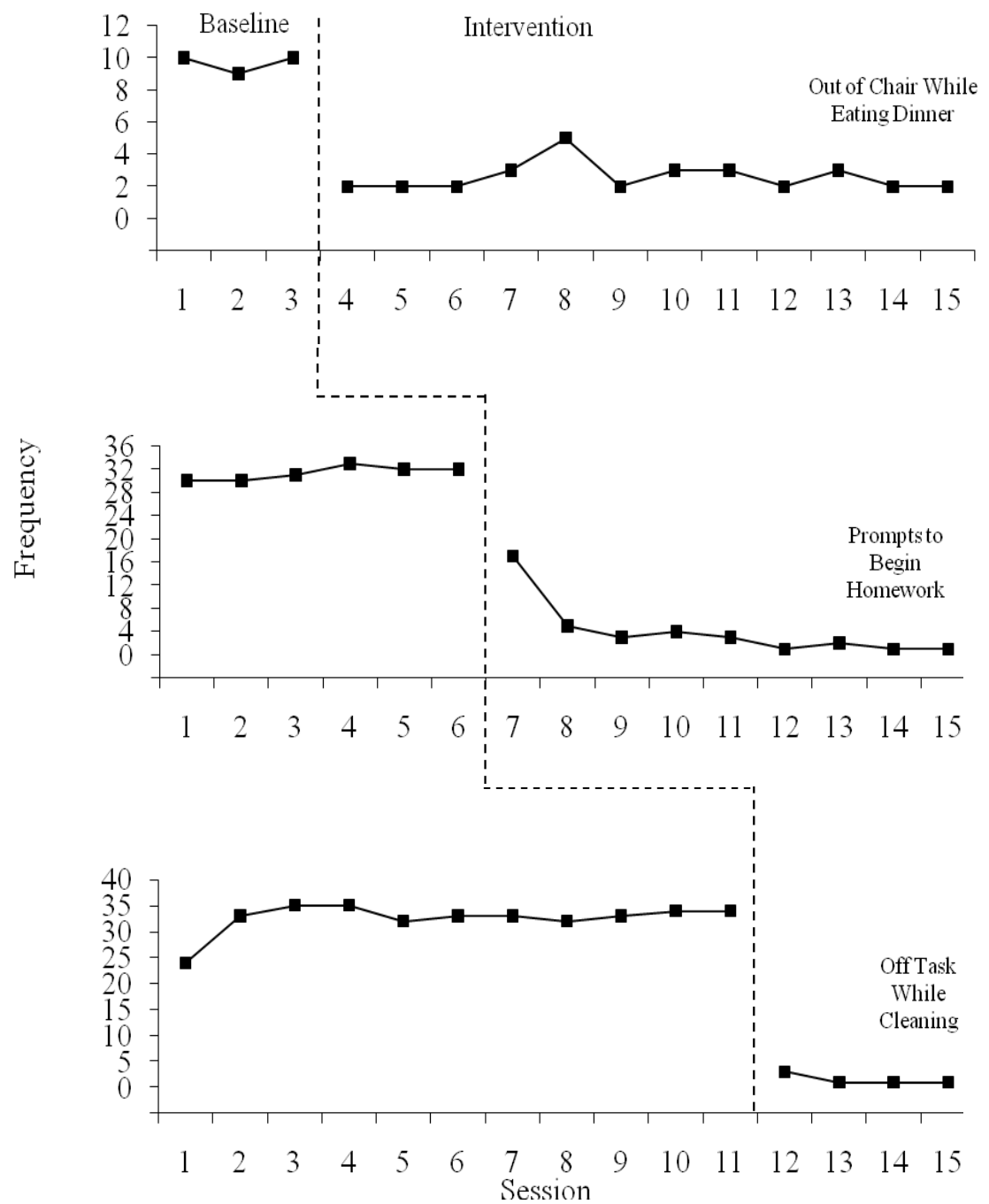


Table 6

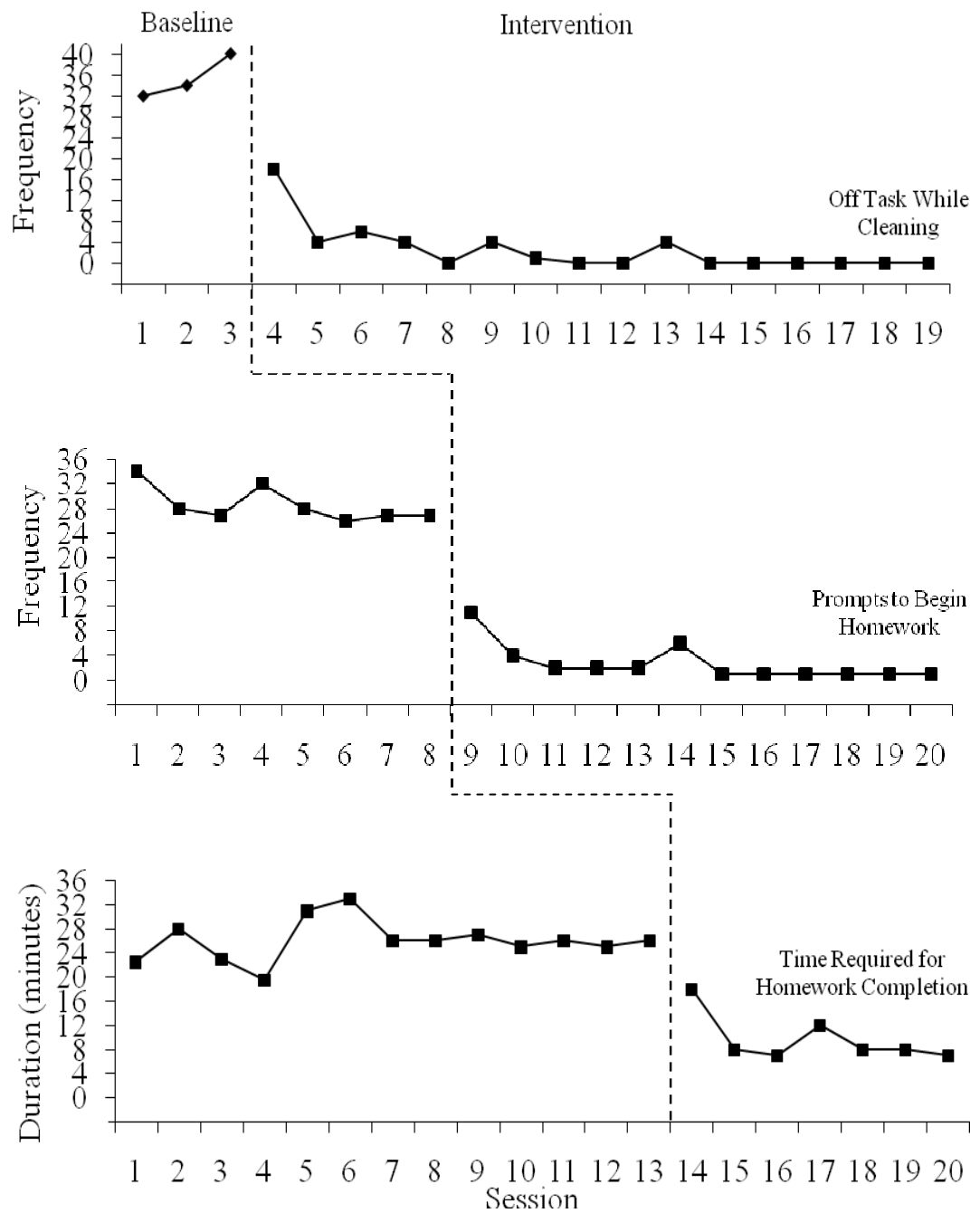
Target Behaviors 1, 2 and 3 for Participant 1

| Behavior | | Baseline | Intervention |
|---------------|-------|----------|--------------|
| 1 | Mean | 9.7 | 2.6 |
| | Range | 9 - 10 | 2 - 5 |
| 2 | Mean | 31.3 | 4.1 |
| | Range | 30 - 33 | 1 - 17 |
| 3 | Mean | 32.6 | 1.5 |
| | Range | 24 - 35 | 1 - 3 |
| Overall Mean | | 28.75 | 2.96 |
| Overall Range | | 9 - 35 | 1 - 17 |

Participant 2 Results

For Participant 2, visual analysis of baseline and intervention data across three challenging behaviors indicates that the parent-professional PBS team training resulted in decreased frequencies for each of the target behaviors (see Figure 2). Positive outcomes emerged with regard to level, trend and variability. The baseline mean for Behavior 1 was 35.3 (range, 32-40) distractions while cleaning up toys. The intervention mean was 2.6 (range, 0-18) distractions while cleaning up toys. There was an immediate and substantial decrease in level following the intervention (i.e., training session). The intervention data revealed an initial descending trend that leveled off with slight variability.

Figure 2: Participant 2 Target Behaviors



The baseline mean for Behavior 2 was 28.6 (range, 26-34) prompts to begin homework. The intervention mean was 2.8 (range, 1-11) prompts to begin homework. There was an immediate and substantial decrease in level following the intervention (i.e., training session). The intervention data revealed an initial descending trend that leveled off and remained flat with little variability.

The baseline mean for Behavior 3 was 26 (range, 19.5-33) minutes for homework completion. The intervention mean was 9.7 (range, 7-18) minutes for homework completion. There was an immediate decrease in level following the intervention (i.e., training session). The intervention data revealed an initial descending trend that leveled off and remained flat with some variability.

Thus, for Participant 2, there was a clear decrease in frequency for Behavior 1 and Behavior 2 and a clear decrease in duration for Behavior 3 immediately following introduction of the intervention (see Table 7). Based on these results, a functional relationship between the independent and dependent variable was established.

Social Validity Data

The PBS Team Training Participant Questionnaire (see Appendix B) was used to determine how satisfied the parents and professionals were with the PBS training they received. The rating for each statement is summarized in Table 8. Data were collected for all 4 (100%) of the participants that attended the PBS team training. There were a total of 12 statements on the PBS Team Training Participant Questionnaire. For question 1 (i.e., the presenter was knowledgeable about the subject matter) 100% (4/4) of the participants strongly agreed. For question 2 (i.e., the presenter clearly communicated the subject matter) 75% (3/4) of the participants strongly agreed and 25% (1/4) agreed.

Table 7

Target Behaviors 1, 2 and 3 for Participant 2

| Behavior | | Baseline | Intervention |
|---------------|-------|-----------|--------------|
| 1 | Mean | 35.3 | 2.6 |
| | Range | 32 - 40 | 0 - 18 |
| 2 | Mean | 28.6 | 2.8 |
| | Range | 26 - 34 | 1 - 11 |
| 3 | Mean | 26 | 9.7 |
| | Range | 19.5 - 33 | 7 - 18 |
| Overall Mean | | 28.04 | 4.06 |
| Overall Range | | 19.5 - 40 | 0 - 18 |

For both question 3 (i.e., the presenter was concerned with ensuring my understanding of the material) and question 4 (i.e., this training increased my knowledge about the topics presented) 100% (4/4) of the participants strongly agreed. For question 5 (i.e., I am confident that I will be able to apply what I have learned) 50% (2/4) of the participants strongly agreed and 50% (2/4) agreed. For questions 6 through 12 related to knowledge and skills obtained, clarity and achievement of objectives, materials and activities used, and overall impression of the training session, 75% (3/4) of the participants rated strongly agreed and 25% (1/4) agreed.

Summary of Findings

Analysis of the means of participant data and visual analysis of the graphs indicates that the collaborative parent-professional PBS team training had an impact on

Table 8

*Ratings on the Positive Behavior Support Team Training Participant Questionnaire
(N=4)*

| Statement | Agree | Strongly Agree |
|------------------------------------------------------------------------------------|-------|----------------|
| 1. The presenter was knowledgeable about the subject matter | | 100% |
| 2. The presenter clearly communicated the subject matter | 25% | 75% |
| 3. The presenter was concerned with ensuring my understanding of the material | | 100% |
| 4. This training increased my knowledge about the topics presented | | 100% |
| 5. I am confident that I will be able to apply what I have learned | 50% | 50% |
| 6. The knowledge I obtained from this training session will be useful | 25% | 75% |
| 7. The skills I obtained from this training session will be useful | 25% | 75% |
| 8. The objectives of the training were clearly stated | 25% | 75% |
| 9. The objectives of the training session were clearly achieved | 25% | 75% |
| 10. The materials provided were useful to meeting the session objectives | 25% | 75% |
| 11. The activities for the session were useful in achieving the session objectives | 25% | 75% |
| 12. Overall, I feel the session was valuable | 25% | 75% |

challenging behavior. The PBS team training decreased the frequency in three challenging behaviors for Participant 1 and decreased the frequency and duration of three challenging behaviors for Participant 2. The overall mean for Participant 1 decreased

from an average of 28.75 (range, 9-35) in baseline to an average of 2.96 (range, 1-17) in intervention. The overall mean for Participant 2 decreased from an average of 28.04 (range, 19.5-40) in baseline to an average of 4.06 (range, 0-18) in intervention.

Overall, analysis of the PBS Team Training Questionnaire ratings for the parents and professionals indicated positive results. The overall average rating for the PBS team training was 4.79 out of 5 (range, 4-5). All 4 participants strongly agreed (100%) that the presenter was knowledgeable about the subject matter, concerned with ensuring their understanding of the material, and the training increased their knowledge about the topics presented.

CHAPTER 5

DISCUSSION

The purpose of the study was to investigate the effects of a collaborative parent-professional positive behavior support (PBS) team training on challenging behaviors of children with autism. This chapter presents a discussion of the results of the research question. The limitations of the study are considered, followed by practical implications of the findings. The chapter closes with suggestions for future research and a concluding summary of the study.

Discussion of Findings

The research question that was answered in this study is presented below. The results are briefly summarized and followed by related discussion.

Research Question, Results, and Discussion

Does collaborative parent-professional PBS team training result in a decrease in child challenging behavior within the home environment?

An analysis of data indicated that the collaborative parent-professional PBS team training decreased the frequency in three challenging behaviors for Participant 1 and decreased the frequency and duration of three challenging behaviors for Participant 2 between baseline and intervention. This finding concurs with the research of Lucyshyn et al. (2007) who found that positive behavior support in families of children with developmental disabilities decreased problem behavior and increased participation in routines.

In the current study, Participant 1 demonstrated a stable baseline with high frequency and little variability for Behaviors 1, 2, and 3 (i.e., out of chair while eating dinner,

prompts to begin homework, and off task while cleaning). Behavior 1 demonstrated slight variability in intervention. In session 8, his mother forgot to give him his morning medication for his hyperactivity so he had a high frequency of out of seat while eating dinner, but by the time he started Behavior 2 the evening medication for hyperactivity had started to have an effect on his behavior. For Behavior 1 during baseline, Participant 1 did not want to sit at the table to eat dinner, it appeared as though he was out of his seat without a clear purpose and perhaps just to be defiant. During intervention, however, he seemed to be out of his seat for more appropriate reasons like getting a paper towel, going to the bathroom, or turning off the television. A primary distraction for Behavior 3 was the television. Once the television was turned off while he was cleaning up his toys the off task distractions diminished rapidly. All three behaviors decreased rapidly from baseline to intervention.

Anecdotal data from the mother of Participant 1 revealed her recognition of the improvement her son had made. She stated, "he sits through dinner at his dad's house and when we eat at a restaurant. He would usually hide under the table or run around the restaurant". She also stated that, "his father will now help him with his homework when he is at his house since his challenging behaviors have decreased during homework time." She further commented, "the time it takes to complete his homework has decreased since I only have to prompt him once or twice to start his homework."

Participant 2 demonstrated a fairly stable baseline for Behavior 1 and 2. Behavior 3 demonstrated a stable baseline toward the middle of the baseline. This could be because it was the beginning of the school year and he had a variety of different homework assignments which became more consistent once the school year progressed. Over time,

once intervention for Behavior 2 started Behavior 1 became a game to see how fast he could clean up his toys. For session 14 for Behavior 2 and 3, Participant 2 was up until midnight playing videogames with his dad so he needed more prompting and the duration for homework completion was longer.

Through anecdotal data, his father stated that,” he will start and finish his homework by himself now, I do not have to sit next to him and make sure he starts and stays on task”. He also commented that,” being consistent each day for homework time has had a huge impact on his challenging behaviors decreasing. It is like he knows that it is homework time and once he is done he can go back to doing what he was doing before homework.” The father stated that,” he has no problems completing his homework at his grandparent’s house now.”

The behaviors for both Participant 1 and 2 decreased during intervention and this may have been because the training contextualized the goals of the intervention and the fit of the intervention to the family context (Moes & Frea, 2002). This study lends support for using the collaborative parent-professional PBS process to decrease challenging behaviors in the home environment (Buschbacher et al., 2004).

Social Validity

The PBS Team Training was positively received. All participants agreed or strongly agreed that the presenter was knowledgeable about the subject matter, clearly communicated the subject matter, and was concerned with ensuring the understanding of the material. The participants also agreed or strongly agreed that the training increased their knowledge of the topic, they would be able to apply what they learned and the knowledge and the skills obtained from the training would be useful. All participants

agreed or strongly agreed that the training objectives were clearly stated and achieved, the materials provided and activities for the training were useful for meeting the objectives, and the overall training was viewed as valuable.

Prior research on staff and parent training in the PBS process revealed that this type of training was very well received in terms of delivery, style, content and perceived value (Ingersoll & Dvortcsak, 2006; Lowe et al., 2007; Markey et al., 2002). Parent training for families of preschool-age children with an autism spectrum disorder (ASD) had positive responses, but only 75% of the families chose to participate at all and 56% participated in the entire program (Ingersoll & Dvortcsak, 2006). In the current study, all participants attended the one, 7-hour day training and were glad that it was not prolonged over multiple sessions due to work and home life commitments. Similar to the previously noted research, the parents and professionals in this study reported high levels of satisfaction related to the PBS training they received.

Limitations

Participants

The study included a limited number of participants, two parent-professional teams with two focus individuals. Both of the focus individuals were boys who were diagnosed with similar disabilities. All participants were the same ethnicity and lived in the Las Vegas, Nevada area. Thus, caution should be exercised with regard to generalizing the findings from this study to participants with differing demographic characteristics.

Setting

All data collection of the focus persons' challenging behaviors were conducted in the home environments, thus, caution should be used when generalizing to other settings (i.e. school, community).

Intervention Factors

The researcher was in the home for each session to collect data and even though the researcher did not intervene, the presence of the researcher and the video camera could have had an effect on the parent and child's behavior.

Conclusions and Practical Implications

Parent Training and Challenging Behavior

The results of this study demonstrate that following a collaborative parent-professional PBS team training, parents were able to use their knowledge of the PBS process to decrease their child's challenging behaviors without feedback and coaching from the researcher. Given the results of this study, collaborative parent-professional PBS team trainings can be offered without feedback and coaching from the researcher following the training to other parents and professionals who want to implement the PBS process.

Model for Support

The results of the study demonstrate that the collaborative parent-professional PBS team training can be effective for decreasing challenging behaviors within the home environment. Given the results on the challenging behavior, a collaborative parent-professional PBS team training should be offered to other families who have children that

engage in challenging behaviors. The training should not require a lot of the parents' or professionals' time and should be cost effective.

Suggestions for Future Research

Lucyshyn et al. (2007) suggested future study could identify the specific components of the PBS intervention that contributed to the behavior change. This recommendation also emerged from the current study. It would be interesting to determine which aspects of the training sessions were most valuable. Future research should also address generalized changes in behavior and maintenance of behavior change as a function of the intervention. Although the Parent Stress Index (Abidin, 1995) was administered in the current study to provide greater understanding of the parent-child systems associated with the participants, future research should investigate this topic further. Studies that include larger sample sizes would allow for conclusions to be drawn related to parent stress and the challenging behaviors of their children. Future research should also be conducted to investigate parent and professional behavioral changes as a result of the collaborative parent-professional PBS training process. Finally, future research needs to be conducted with different genders and disabilities over an extended period of time.

Summary


The purpose of this study was to investigate the effects of a collaborative parent-professional positive behavior support (PBS) team training on challenging behaviors of children with autism. Participants were two parent-professional teams and two focus individuals. All sessions were conducted in the home environment. The sessions lasted one-hour on four days a week. During baseline and intervention, the researcher collected data on the frequency or duration of the challenging behavior in the home environment.

The target behaviors were out of seat while eating dinner, prompts to begin homework, off task while cleaning, and time required for homework completion. All three challenging behaviors for both participants decreased in frequency or duration. The results of the current study suggest that a collaborative parent-professional positive behavior support (PBS) team training decreased challenging behaviors in children with autism. Future research should be conducted to study the effects a collaborative parent-professional positive behavior support (PBS) team training has on generalization and maintenance of the child's challenging behavior, effects on the parent and professional behavior, and the effects of the specific components of the training.

APPENDIX A

PBS TEAM TRAINING POWERPOINT PRESENTATION


**Collaborative Parent & Professional
Positive Behavior Support Team Training:
A Problem Solving Approach**



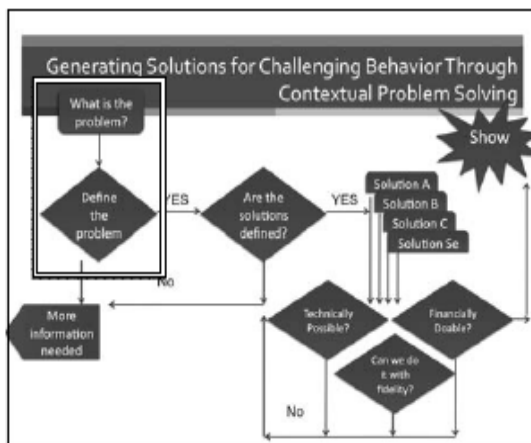
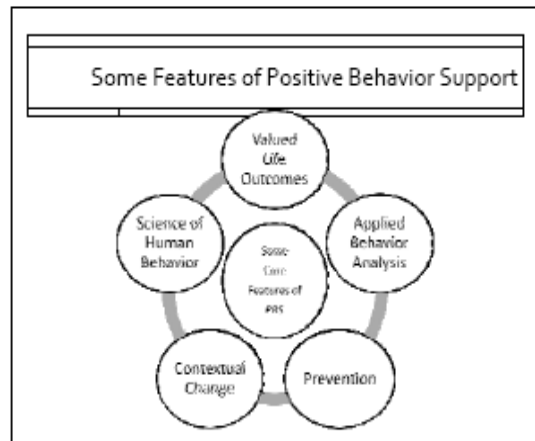
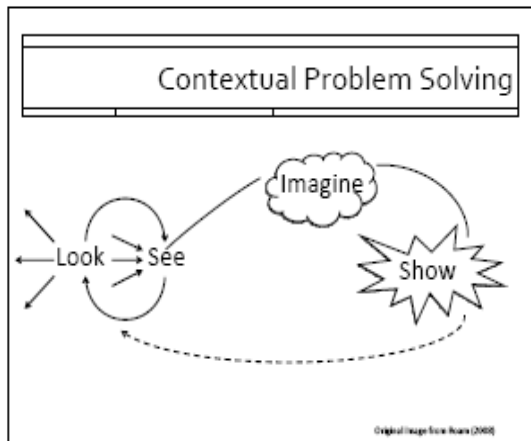
Shannon Crozier, Ph.D., BCBA
September 9, 2009

5 + 5 + 5

| 5 good things _____ does now | 5 things I'd like to see _____ learn to do more often | 5 things I'd like to see _____ learn to do less often |
|------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| 1. | 1. | 1. |
| 2. | 2. | 2. |
| 3. | 3. | 3. |
| 4. | 4. | 4. |
| 5. | 5. | 5. |

Look → See 

Directions: Begin by listing in the left-hand column 5 desirable behaviors the child does regularly now; things that you want him or her to continue doing. Next, list in the middle column 5 behaviors you would like to see your child do more often (things the child does sometimes, but should do with more regularity). Then, list in the right-hand column 5 behaviors that you would like to see the child do less often (things the child does sometimes, but should do less frequently).



 **What we want to accomplish!**

- Describe and engage in effective noticing practices
- Discuss behavior in context
- Describe behaviors in observable and measurable terms
- Use technical and nontechnical language to describe basic behavior terminology
- Engage in effective, efficient & nonjudgmental interviewing
- Draft a functional hypothesis based on interview data
- Select a usable behavior observation form to confirm/deny hypothesis
- Observe and record behavior in context
- Draft a summary statement of behavior in context
- Use a competing behaviors pathway format as a "jumping off point" for behavior support planning
- Identify "doable" alternative and desired behaviors aligned with collective values
- Identify necessary components for a functional and contextual behavior support plan
- Describe prevention strategies as a "first defense" for BSP
- Describe a skills training model for teaching alternative and desired behaviors
- Identify "overlay" reinforcers to support new behaviors and maintain appropriate social behaviors
- Select and use appropriate progress monitoring & informative data collection tools

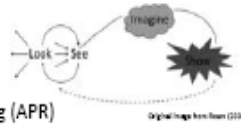
How will we get there?

* Case Examples & Discussion

- * Model (Sam)
- * Lead (Brandon)
- * Test (Your focus person)

* Model demonstrations

* Active participant responding (APR)



What we want to accomplish!

* Describe and engage in effective noticing practices

- Discuss behavior in context
- Describe behaviors in observable and measurable terms
- Use technical and non-technical language to describe basic behavior terminology
- Engage in effective, efficient & nonjudgmental interviewing
- Draft a functional hypothesis based on interview data
- Select a usable behavior observation form to confirm/deny hypothesis
- Observe and record behavior in context
- Draft a summary statement of behavior in context
- Use a competing behavior pathway format as a "jumping off point" for behavior support planning
- Identify "desirable" alternative and desired behaviors aligned with collective values
- Identify necessary components for a functional and contextual behavior support plan
- Describe prevention strategies as a "first deliverable" for SSP
- Describe a skills training model for teaching alternative and desired behaviors
- Identify "overlooked" reinforcers to support new behaviors and maintain appropriate social behaviors
- Select and use appropriate progress monitoring & informative data collection tools

Building the Context for Behavior Change

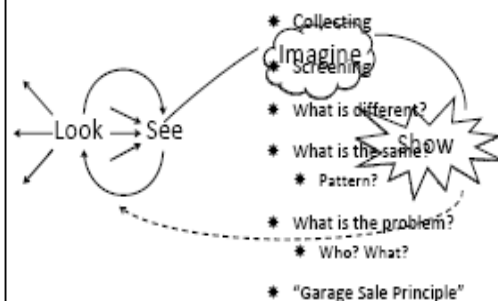
Let's talk about why!

* Let's discuss:

- * What is it that has brought you to the training today?
- * What experiences in your past do you believe contribute to your success as a parent/professional?



Contextual Problem Solving Functional Behavioral Assessment Process



"Garage Sale Principle"

Room (2018)

What are the challenges you encounter when looking at this environment?



Generating Solutions for Challenging Behavior Through Contextual Problem Solving

"Garage Sale Principle"

Room (2018)

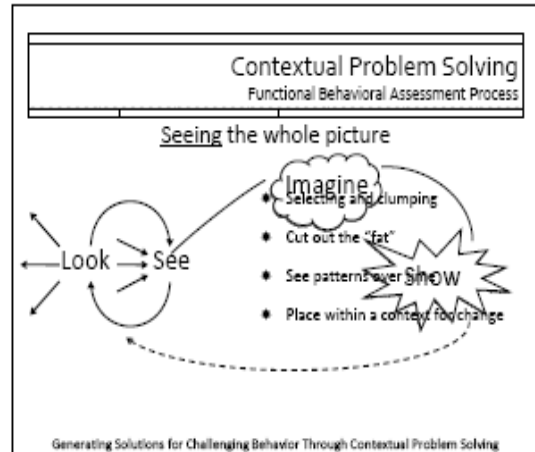
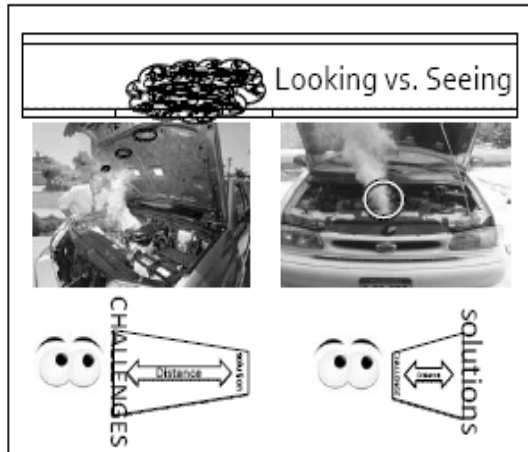
"Everything looks different when we can see it"



Rules for more effective looking

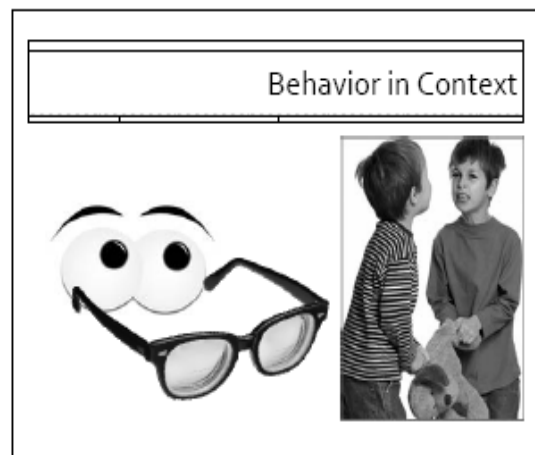
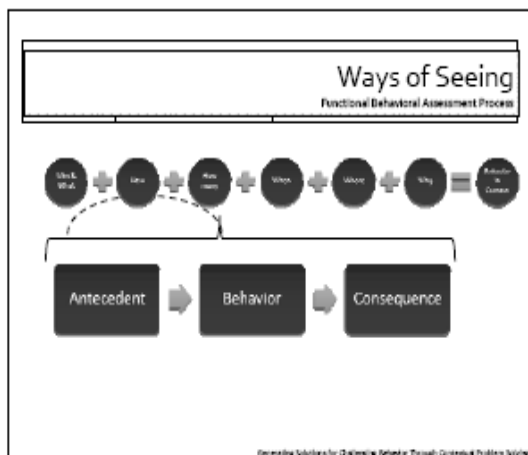
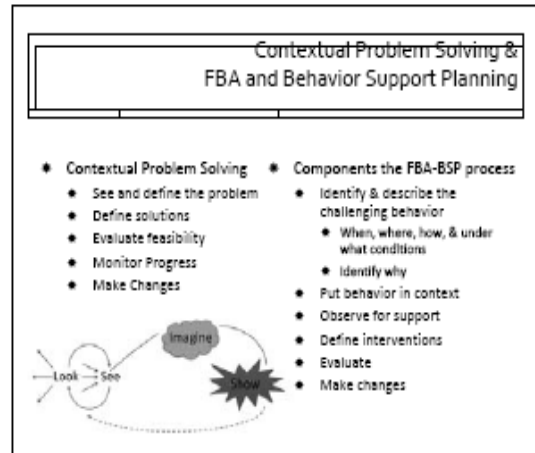
- Collect everything you can
- Lay it out where you can look at it
- Establish the context
- Practice visual triage
 - * Cut out the unnecessary

Generating Solutions for Challenging Behavior Through Contextual Problem Solving



What we want to accomplish!

- Identify and assign the effective writing position
- **Discuss behavior in context**
 - Describe behaviors in observable and measurable terms
 - Use behavior and environmental language to describe task-behavior relationship
 - Engage in effective, efficient & respectful interaction
 - Build a functional hypothesis based on interview data
 - Select a valid behavior observation form to collect relevant hypothesis
 - Observe and record behavior in context
 - Draft a necessary statement of behavior in context
 - Use a computer interface program to create a "jumping off point" for behavior support planning
 - Identify "critical" antecedents and desired behaviors aligned with collective vision
 - Identify necessary components for functional and contextual behavior support plan
 - Describe prevention strategies as a "first defense" for BIP
 - Describe video training model for teaching alternative and desired behaviors
 - Identify "support" strategies to support core behaviors and reduce inappropriate social inclusion
 - Select and use appropriate program monitoring & behavior data collection tools



What we want to accomplish!

- Describe and engage in effective setting practices
- **Discuss behavior in context**
- **Describe behaviors in obs. and meas. terms**
- **Use technical and nontechnical language to describe basic behavior terminology**
- Engage in effective, efficient & nonjudgmental interviewing
- Draft a functional hypothesis based on interview data
- Select a usable behavior observation form to confirm/deny hypothesis
- Observe and record behavior in context
- Draft a summary statement of behavior in context
- Use a competing behaviors pathway format as a "jumping off point" for behavior support planning
- Identify "stable" alternative and desired behaviors aligned with collective values
- Identify necessary components for a functional and contextual behavior support plan
- Describe prevention strategies as a "first defense" for SSP
- Describe a skills training model for teaching alternative and desired behaviors
- Identify "overlays" reinforcements to support new behaviors and maintain appropriate social behaviors
- Select and use appropriate progress monitoring & informative data collection tools

Introducing the "Dead-Man Test"

Who
&
What

If a dead man (or woman) can do it, it is not a behavior!

- ★ **Behavior:** Any activity that passes the dead-man test
- ★ ASK YOURSELF...CAN A DEAD MAN DO IT?
- ★ If yes, it is NOT a Behavior
- ★ If no, CAN YOU SEE IT AND COUNT IT?
- ★ Sit quietly
- ★ DEAD MAN/WOMAN — NOT A BEHAVIOR
- ★ Actively engage reading the paper & answering questions
- ★ Behavior
- ★ Does not follow directions
- ★ Does not comply with instructions within 10s

Observable, Measurable, & Precise Descriptions of Behavior

Who
&
What

| Examples | T | Nonexamples |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ★ Follows directions w/in 5 sec ★ When given a direction responds with a counter argument (e.g., "why should I?") ★ Angered facial expressions, nagging comments ("you're stupid") ★ Destroys materials, screams, cries ★ Hits peers | sharing charting | <ul style="list-style-type: none"> ★ Defiant ★ Rude ★ Does not respect authority ★ Mean ★ "possessed" ★ Intolerable ★ Noncompliant |

The Who and What

What

Functional Behavioral Assessment Process

Who

Sam, 4 years old

The What = The Behavior

Who
&
What

Building the Context for Behavior Change

Behavior
 Hitting, Spitting, Scratching
 (B)

The What = The Behavior

Who
&
What


Building the Context for Behavior Change


Who: Brandon
Age: 3

Behavior
 What do you SEE?
 (B)

Your turn!

➤ Let's identify the specifics of The WHO and the WHAT for your focus person



| | |
|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <h2 style="text-align: center;">The Where & When</h2> <p style="text-align: center;">Functional Behavioral Assessment Process</p> | |
| <p>When</p> <p>During independent play in the classroom with peers</p> | <p>Where</p>  |
| <p>Who</p> <p>Sam</p> | |

| Common antecedents (triggers) | |
|-------------------------------|-------------------------------|
| ➤ Demands/requests | <div>Antecedent (A)</div> |
| ➤ Difficult tasks | |
| ➤ Transitions | |
| ➤ Interruptions | |
| ➤ Alone (no attention) | |
| ➤ Peer altercations | |

Where & When
Building the Context for Behavior Change

Who & What

Where & When

Antecedent (A)
During independent play in the classroom

Behavior (B)
Hits, Spits, Scratches

Consequence (C)
Teacher intervenes and removes child from play area

Where & When

Functional Behavioral Assessment Process

General to Specific

Where & When


Who

Brandon, 30 months

What do you see & hear?

Where & When

Building the Context for Behavior Change



Who & What

Where & When

Antecedent
(A)

➔

Behavior
(B)


?

➔

?

Your turn!

➔ What are some of the possible antecedents to the behaviors you identified on p.1 and p. 15 of the TOOLBOX



Why

The Why = Consequence

Antecedent
(A)

➔

Behavior
(B)

➔




Consequence
(C)




Why

Back to Basics!

"Hard wired" & reinforcement history...

Building the Context for Behavior Change


Obtain/Gain or
Escape/Avoid?

(ing)

Why

Why

Building the Context for Behavior Change



Obtain/Gain or
Escape/Avoid?



What we want to accomplish!

- Describe and engage in effective writing position
- Assess behavior to context
- Describe behaviors in observable and measurable terms
- **Use technical and nontechnical language to describe basic behavior terminology**
- Develop effective, efficient & nonpunitive interventions
- Draft a functional hypothesis based on interview data
- Select a mode of behavior observation from a contingency hypothesis
- Observe and record behavior to context
- Draft a necessary statement of behavior to context
- Use a computerized behavior planning format as a "planning off paper" for behavior support planning
- Identify "triggers" observed and desired behaviors aligned with collective vision
- Identify necessary supports from functional and contextual behavior support plan
- Describe prevention strategies as a "first defense" for BIP
- Develop a data-tracking model for baseline alternative and desired behaviors
- Identify "triggers" / reinforcers to support new behaviors and maintain appropriate social behaviors
- Select and use appropriate program monitoring & information data collection tools

Types of consequences

| | Add to (+) | Remove (-) |
|---------------|------------------------------|--------------------------------|
| Reinforcement | Present a pleasant something | Remove an unpleasant something |
| Punishment | | |

Who Brandon

Hypothesis Development


Functional Behavioral Assessment Process

See the whole picture

What's your best guess for why?


What? Tantrum

Where/When At home after school



Your turn!

➤ As a team, continue working on your summary statement on p.15 of your TOOLBOX



Three-Term Contingency

Building the Context for Behavior Change

(A) ➔ (B) ➔ (C)

Some Examples

Antecedent (where/when), Behavior (what), Consequence (why)?

Group activities are over and Tom, a 4-year old child in a daycare setting stomps his foot on the floor and kicks the wall. The teachers immediately rush to him and ask him what's wrong and engage him in a pleasant conversation (gain - attention).

Who?

When/Where
E
(A)

What/Behavior
(B)

Why?
(C)

Some Examples

Antecedent (where/when), Behavior (what), Consequence (why)?

When Jon is asked to engage in a difficult work task, he throws all materials on the floor and screams, noncontextual comments. His mom will remove any demand and place him in timeout for the remainder of the morning or until he calms down.

Who?

When/Where
E
(A)


What/Behavior
(B)

Why?
(C)

Active Participant Responding (APR)

Building a 3-Term Contingency

1. Pick a number between 1 and 40
 2. Listen/read the example
 3. Look/see: What is highlighted?
 A = Antecedent (where/when)
 B = Behavior (what)
 C = Consequence (why)
 4. Select your response
 5. "Cards Up"



If you are correct & your number appears give yourself a tally!
Tally marks = tickets!

What's highlighted? ↗

Antecedent, Behavior, Consequence?

During circle time at school, Tom often interrupts his peers during their turn to talk. When his teacher tells him to stop, he is quiet for a few minutes but then starts interrupting again. Eventually, his teacher lets him have another turn. Tom seems to interrupt more when he is not called on first.

Behavior (B) All odd #s

What's highlighted? ↗

Antecedent, Behavior, Consequence?

During circle time at school, Tom often interrupts his peers during their turn to talk. When his teacher tells him to stop, he is quiet for a few minutes but then starts interrupting again. Eventually, his teacher lets him have another turn. Tom seems to interrupt more when he is not called on first.

Consequence Gets turn End in 0

What's highlighted? ↗

Antecedent, Behavior, Consequence?

When Alba, a 5 year old girl with mental retardation is given a nonpreferred household activity, she is likely to refuse and engage in hitting to avoid the task. This behavior is more likely if Alba is tired due to lack of sleep the night before.

Antecedent All even #s

What's highlighted? ↗

Antecedent, Behavior, Consequence?

When Alba, a 5 year old girl with mental retardation is given a nonpreferred household activity, she is likely to refuse and engage in hitting to avoid the task. This behavior is more likely if Alba is tired due to lack of sleep the night before.

Behavior End in 5 or 7

What's highlighted? ↗

Antecedent, Behavior, Consequence?

When her mother asks Cara to put her toys away, she tells her "no", crosses her arms, and refuses to look at her to avoid the task. This behavior is more likely if she is tired.

Antecedent All numbers




Why do we seek those consequences in the first place? ↗

Motivation!

| Motivational Condition | Values |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Deprived of food (hungry) Deprived of drink (thirsty) Deprived of physical contact (wants hug) Deprived of attention (attention) Deprived of TV (wants TV) Deprived of stimulation (all varieties) | <ul style="list-style-type: none"> Food Drink, liquids Physical contact Attention TV Stimulation (specific) |

The Chocolate Lovers Dilemma

Building the context for behavior change




↗ Under what conditions do I value eating chocolate?
 ↗ Under what conditions do I not value eating chocolate?

Setting Events (Se)

Setting Events, Set - Up!

Building the context for behavior change



Setting Events

Remove the Lock
Sets - Up the Trigger

+

Antecedent

The Trigger
Sets - Off

Setting Event (Se) makes it 4-terms

Alter the VALUE of the consequence in the MOMENT

```

graph LR
    SE[Setting Event] --> A[Antecedent] --> B[Behavior] --> C[Consequence]
  
```

| Setting Event (Se) | Valued Consequences |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Missed sleep, too much Missed medication Skipped breakfast Long time without attention Long duration of boring work tasks Altercation with peers | <ul style="list-style-type: none"> get sleep get access to meds get food get attention esc/avoid boring environment esc/avoid peers |

Setting Event Examples in Context ↗

When James gets off the school bus and walks into school he asks for Raisinets, his favorite candy. Teachers say, "it's morning, James. Snack time is later." Asking is more likely when he's missed breakfast.


Setting Event Examples in Context ↗

Sandy really loves to talk – most of the time she is just "scripting" what she's heard on TV! She's more likely to "script" when she's been asked to be quiet and she is quiet for lengthy periods of time --- like at church!

Active Participant Responding (APR)

Building a 3-Term Contingency

1. Pick a number between 1 and 40
2. Listen/read the example
3. Look/see: What is highlighted?
 - A = Antecedent
 - B = Behavior
 - C = Consequence
 - D = Setting Event
4. Select your response
5. "Cards Up"



If you are correct & your number appears give yourself a tally!
Tally marks = tickets!

What's highlighted?

Antecedent, Behavior, Consequence or Setting event (D)?

When Bobby is asked to watch TV in a noisy room, he is likely to scream, run in circles, and bother others to get attention. This is more likely when he has headache.

Antecedent

Wearing Purple?
Number is 20 - 30

What's highlighted?

Antecedent, Behavior, Consequence or Setting event (D)?

When Bobby is asked to watch TV in a noisy room, he is likely to scream, run in circles, and bother others to get attention. This is more likely when he has headache.

Setting Event

Numbers
2, 8, 18, 28, 34,
38, & 40

What's highlighted?

Antecedent, Behavior, Consequence?

When her mom asks Lisa to do something she doesn't like, **she puts her head down on her arms** until her mom asks her brother or sister to do it.

Behavior

If your name starts with an N

What's highlighted?

Antecedent, Behavior, Consequence?

When her mom asks Lisa to do something she doesn't like, **she puts her head down on her arms** until her mom asks her brother or sister to do it. Lisa is more likely to put her head down and ignore her mom if she missed her medicine and didn't get enough sleep.

Setting Event

If you live in or near Las Vegas!




What we want to accomplish!

- Describe and engage in effective noticing practices
 - Observe behavior in context
 - Describe behavior in observable and measurable terms
 - Use technical and contextual language to describe the task-behavior relationship
- Engage in effective, efficient & nonjudgmental interviewing
 - Develop functional hypotheses based on interview data
 - Develop a behavior observation form to collect hypothesis
 - Observe and record behavior in context
 - Develop a summary statement of behavior in context
 - Use a competing behaviors outcome format as a "lens" to identify the behavior support strategy
 - Identify "desired" alternative and desired behaviors aligned with effective routines
- Identify necessary components for a functional and contextual behavior support plan
 - Develop the provision of supports as a "first choice" for BIP
 - Develop a skills training module for teaching alternative and/or new behaviors
 - Identify "desired" routines to support new behaviors and new routines appropriate social behaviors
 - Select and use appropriate program monitoring & behavioral data collection tools

Formal gathering of information Functional Behavioral Assessment Process

Seeing the whole picture



Interview

Observe


Summarize

The Functional Assessment Checklist for Staff
Adapted by Anderson & Borgmeier (2007) from March, Horner, Lewis-Palmer, Brown, Crone, & Todd (1999)

Seeing Through the Eyes of Others The Interview Process

Effective Interview Skills

- Focused attention
- Judgment-free hearing
- Clarifying questions
- Dig deeper
- Restate
- Check in



The Interview Process is an Indirect Process What's the function of the interview?

What is it? Information gathering tool


What's the outcome? An informed hypothesis statement including the Se, A, B, and C presumed to be maintaining behavior within a routine

Good news! If you can generate a hypothesis statement & the team is confident with this statement --- move on to direct observation!

The Interview Process is an Indirect Process What's the function of the interview?

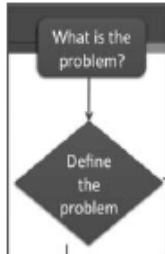
Some examples in your toolbox...

- Functional Assessment Checklist for Staff
- Individual Guided Interview
- Functional Behavioral Assessment Interview



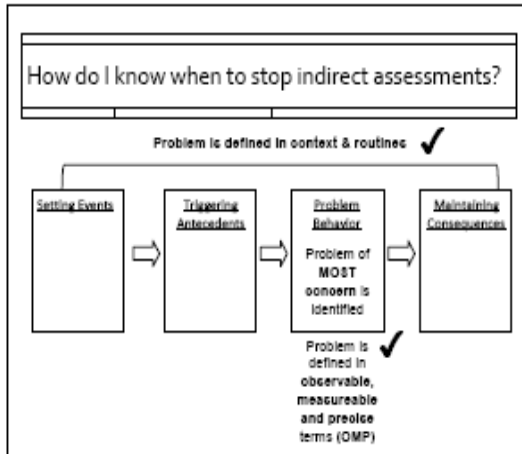
The Functional Assessment Checklist for Staff
Adapted by Anderson & Borgmeier (2007) from March, Horner, Lewis-Palmer, Brown, Crone, & Todd (1999)

How do I know when to stop indirect assessments?



Problem of **MOST** concern is identified ✓

Problem is defined in **observable, measurable and precise** terms (OMP) and within context of routines ✓



What we want to accomplish!

- Describe and engage in effective noticing practices
 - Choose behavior to observe
 - Describe behavior in observable and measurable terms
 - Use functional and nonfunctional language to describe local behavior terminology
 - Engage in effective, efficient & nonjudgmental interviewing
- Draft a functional hypothesis based on interview data**
 - Select a usable behavior observation form to confirm/deny hypothesis
 - Observe and record behavior in context
 - Draft a summary statement of behavior in context
 - Use a compiling behavior pathway format as a "jumping off point" for behavior support planning
 - Identify "desirable" alternatives and desired behaviors aligned with collective values
 - Identify necessary components for a functional and contextual behavior support plan
 - Describe prevention strategies as a "first defense" for BIP
 - Describe a skill training model for teaching alternative and desired behaviors
 - Identify "level of" reinforcers to support new behaviors and maintain appropriate social behaviors
 - Select and use appropriate progress monitoring & informative data collection tools

Hypothesis statement DRIVES observations

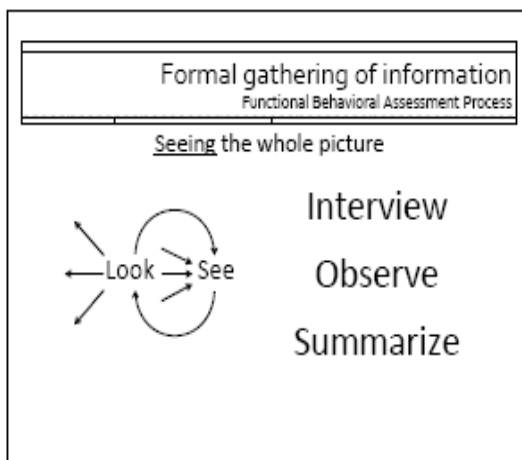
Working smarter, not harder!

- A hypothesis statement has these elements
 - When/where (Antecedent & sometimes Setting Event)
 - What & who (Behavior and Individual)
 - Why? (Consequence)

When Mike is eating dinner (A), he repeatedly gets up from the table (B). He gets to engage in more interesting activities. This is more likely when he was has finished eating his food (Se).

What we want to accomplish!

- Describe and engage in effective noticing practices**
 - Choose behavior to observe
 - Describe behavior in observable and measurable terms
 - Use functional and nonfunctional language to describe local behavior terminology
 - Engage in effective, efficient & nonjudgmental interviewing
 - Draft a functional hypothesis based on interview data
- Select a usable behavior observation form to confirm/deny hypothesis**
 - Observe and record behavior in context
 - Draft a summary statement of behavior in context
 - Use a compiling behavior pathway format as a "jumping off point" for behavior support planning
 - Identify "desirable" alternatives and desired behaviors aligned with collective values
- Identify necessary components for a functional and contextual behavior support plan**
 - Describe prevention strategies as a "first defense" for BIP
 - Describe a skill training model for teaching alternative and desired behaviors
 - Identify "level of" reinforcers to support new behaviors and maintain appropriate social behaviors
 - Select and use appropriate progress monitoring & informative data collection tools




Don't get caught in the form over function

Is there support for your summary statement?

Some Observation Tools

- Functional Assessment Observation Form (FAO-F)
- Antecedent-Behavior-Consequence Forms
 - Behavior Log
- Scatter plot
- Rating Scale
- Weekly report



Scatter plot

When
Where
Why

Scatterplot

Child: Joe Behavior: Screaming, crying, and dropping to the floor
 Date: 5/1 through 5/10

Record the times of day (and/or activities) in which the behavior might occur. Write in the date for the recording period in the first row. When the behavior occurs, shade in the corresponding box.

| Time | Activity | Dates | | | | | | | | | |
|--------------|----------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | | 5/1 | 5/2 | 5/3 | 5/4 | 5/5 | 5/6 | 5/7 | 5/8 | 5/9 | 5/10 |
| 7-9 A.M. | Preparing for school | | | | | | | | | | |
| 9-12 P.M. | Transition to school | | | | | | | | | | |

ABC Form

When
Where
Why

Behavior Log

Record situations in which the individual is difficult, including specifically what the individual says and does and what occurs before and after the behavior

| Antecedent (Before Behavior) | Behavior | Consequence (After Behavior) |
|---------------------------------|----------|---------------------------------|
| | | |
| | | |

What we want to accomplish!

- Describe and measure behavior in objective, verifiable terms
- Observe behavior in context
- Describe behavior in observable and measurable terms
- Use behavior and environmental language to develop behavior-formulating
- Develop an effective, efficient, and appropriate behavior plan
- Draft a functional hypothesis based on interview data
- Select a model behavior observation form to modify/develop hypothesis

Observe and record behavior in context

Draft a summary statement of behavior in context

- Use a competing behavior pattern to write as a "jumping off point" for behavior support planning
- Identify "trouble" antecedents and desired behaviors aligned with collective vision
- Identify necessary components for a functional and measurable behavior support plan
- Describe prevention strategies as a "first defense" for staff
- Describe skills training needed for teaching alternative and desired behaviors
- Identify "tools for" related to support new behaviors and maintain appropriate social behaviors
- Select and use appropriate system monitoring & information data collection tools

Theo's Summary Statement

When Theo does not get the teacher's attention, he is likely to be demanding, yell, and throw things to get the teacher's attention. This behavior pattern is more likely when the teacher is paying attention to other students.

Does the direct observation support this summary statement? ... Let's take a look at the data

When
Where
Why

A-B-C Direct Observation

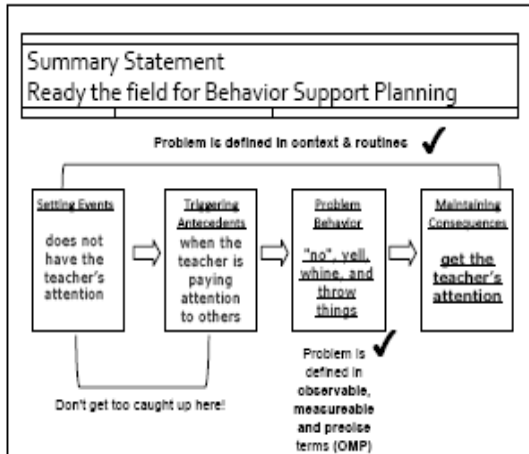
| Time | Antecedents | Behavior | Consequence |
|------|---------------------------------|------------------------------------------------|----------------------------------------------------------|
| 9:00 | Teacher helping another student | Yells, demands help, interrupts, throws pencil | Teacher tells Theo to wait his turn - continues behavior |
| 9:10 | Teacher working at desk | Raises hand, yells teacher's name | Teacher goes to help Theo - begins work |

Theo's Summary Statement

When Theo does not get the teacher's attention, he is likely to be demanding, yell, and throw things to get the teacher's attention. This behavior pattern is more likely when the teacher is paying attention to other students.

Does the direct observation support this summary statement????

When
Where
Why



Collecting Direct Observation Data

Behavior Log

Record situations in which the individual is difficult, including specifically what the individual says and does and what occurs before and after the behavior

| Time | Antecedent (Before Behavior) | Behavior | Consequence (After Behavior) |
|------|------------------------------|----------|------------------------------|
| | | | |
| | | | |
| | | | |

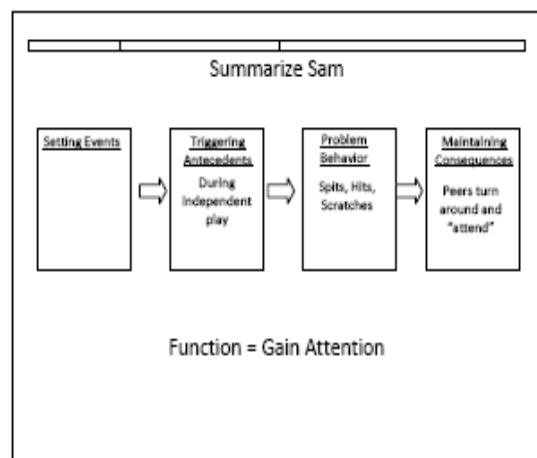
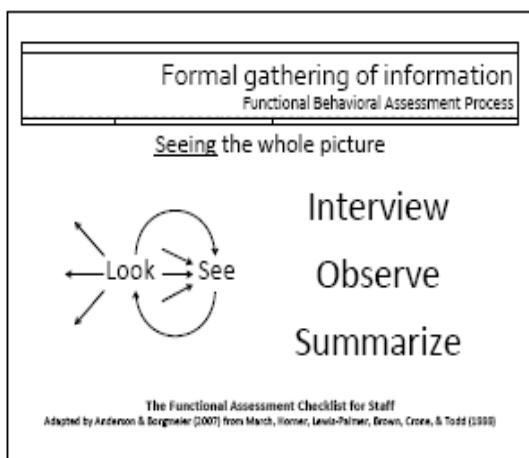
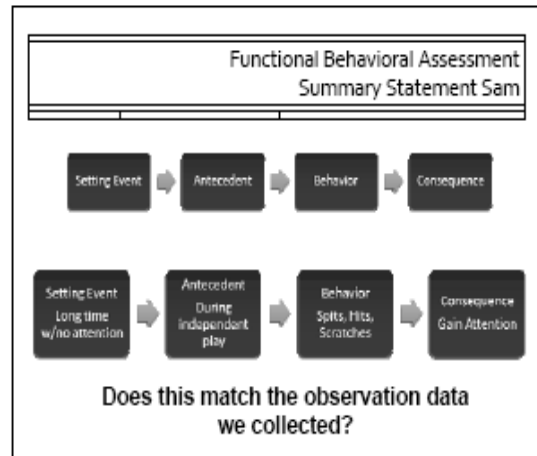
(Note: A cartoon face with arrows pointing to the Behavior column is labeled "solutions")

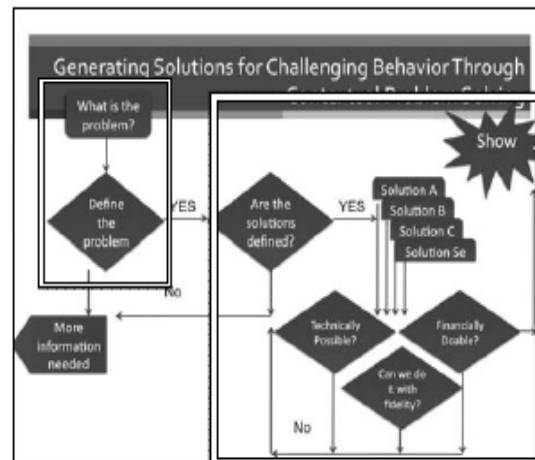
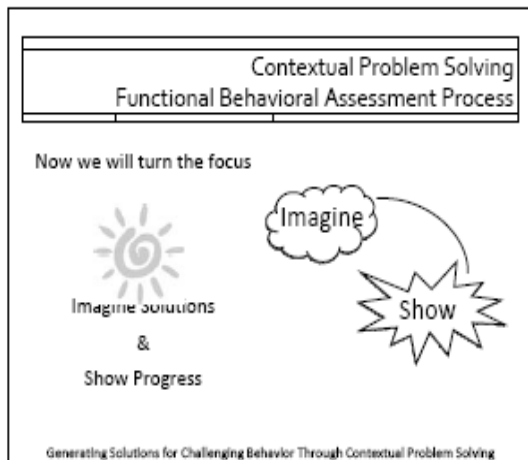
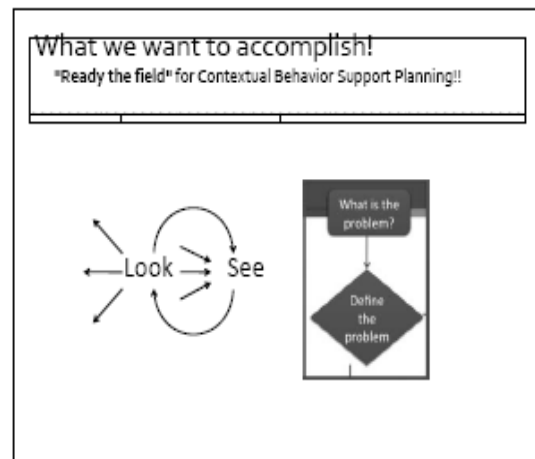
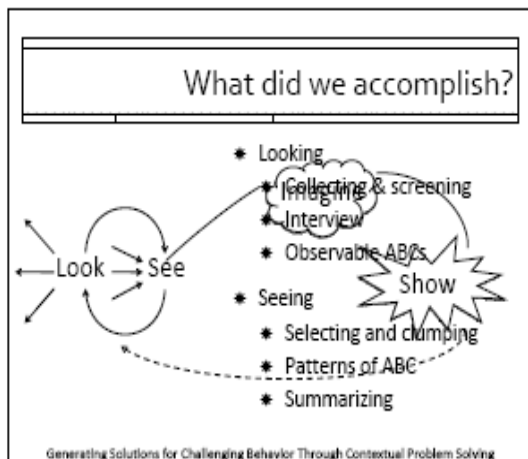
Watch Sam...

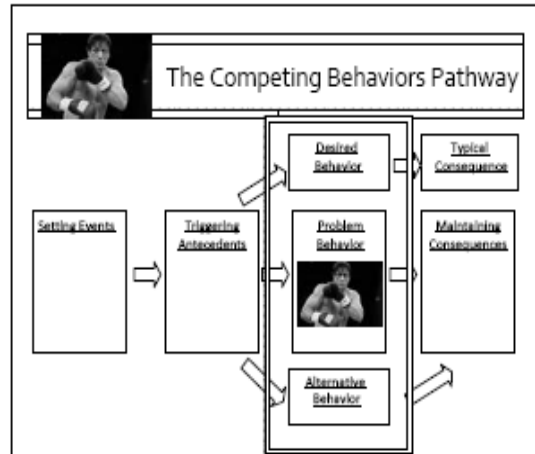
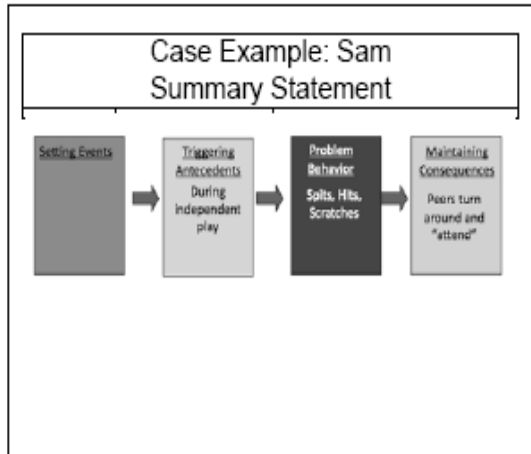
Behavior Log

Record situations in which the individual is difficult, including specifically what the individual says and does and what occurs before and after the behavior

| Time | Antecedent (Before Behavior) | Behavior | Consequence (After Behavior) |
|------|------------------------------|----------|------------------------------|
| | | | |
| | | | |
| | | | |



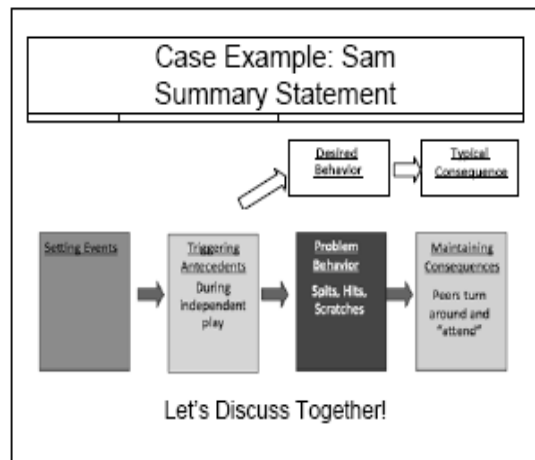


Identify the Desired Behavior

- ★ Playing independently?
- ★ Keeping hands to self?
- ★ Parallel play?
- ★ Using appropriate language?
- ★ Saying hello to peers?
- ★ Asking to play?

| |
|-------------------------------------------------------------------|
| <i>Desired Behavior:</i> What does the individual value? |
| <i>Desired Behavior:</i> What will lead to self-determination? |
| <i>Desired Behavior:</i> What improves quality of life? |
| <i>Desired Behavior:</i> What does the environment expect? |

See what isn't there!



Establishing Goals Identify the Desired Behavior

- ★ Let's assume the role of Sam's teacher/parents
- ★ What are some desired behaviors we would need to have Sam perform in a classroom or social setting?
- ★ Using the 5 + 5 + 5 let's talk about the desired behavior (s)
- ★ REMEMBER: Right now the challenging behaviors are maintained by peer yelling (attention)

See what isn't there!

Establishing Goals Identify the Desired Behavior

5 good things _____ does now

- Picture exchange
- Loves trucks
- Enjoys peer interaction
-
-

5 things I'd like to see _____ learn to do more often

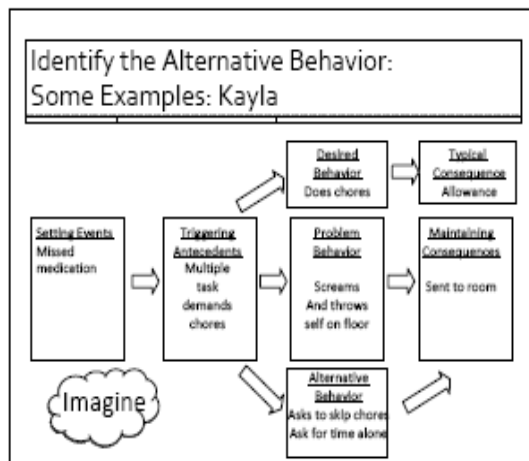
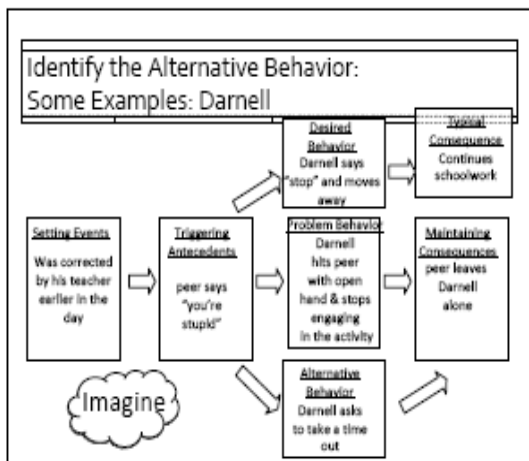
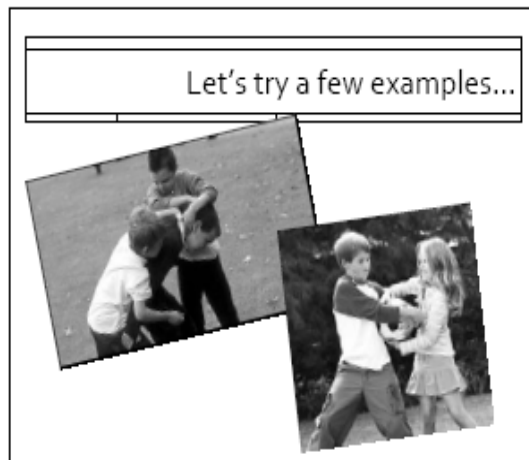
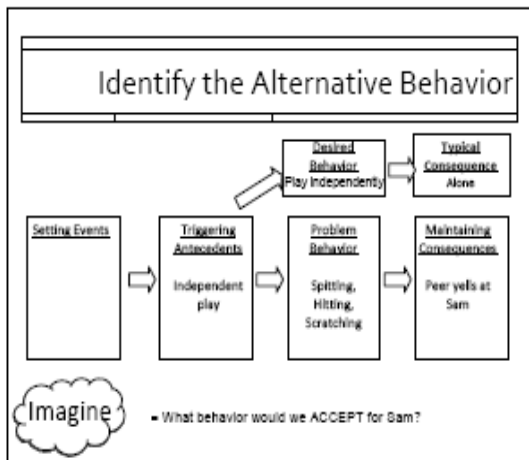
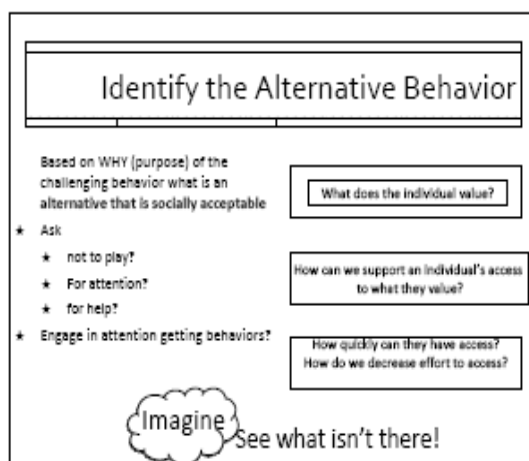
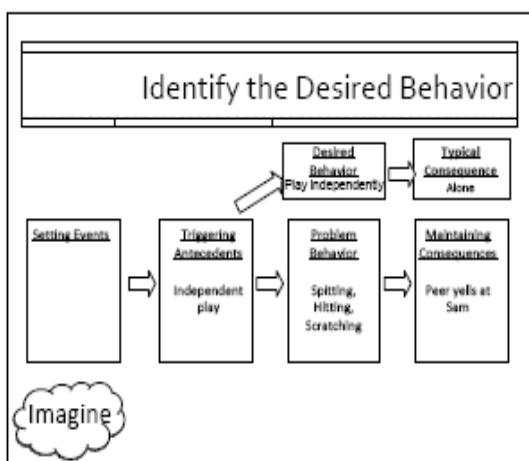
- Play w/peers approp.
- Request peer attention
- Speak contextually
-
-

5 things I'd like to see _____ learn to do less often


-
-
-
-
-

Directions: Begin by listing in the left-hand column 5 desirable behaviors the child does now, or has been doing. Next, list in the middle column 5 behaviors you would like to see your child do sometimes, but should do with more regularity. Then, list in the right-hand column 5 behaviors you would like to see the child do less often (things the child does sometimes, but should do less frequently).


See what isn't there!



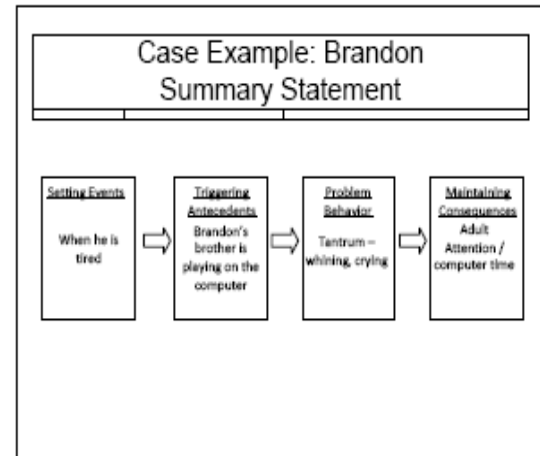
Remember Brandon?



- ★ Who: Brandon
- ★ Age: 3



Who



Identify the Desired Behavior

- ★ Playing independently?
- ★ Asking to play on the computer?
- ★ Playing another game quietly?
- ★ Asking to play?

Desired Behavior
 What does the individual value?

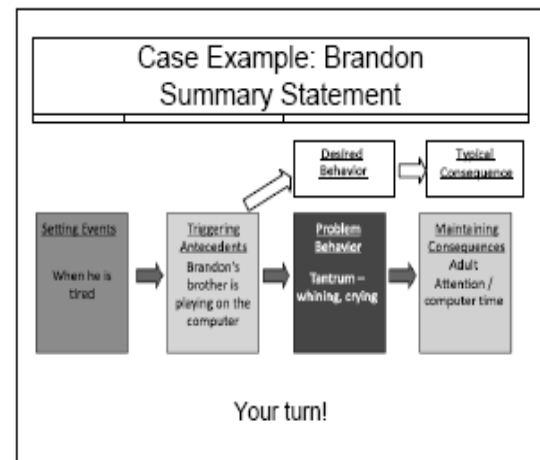
Desired Behavior
 What will lead to self-determination?

Desired Behavior
 What improves quality of life?

Desired Behavior
 What does the environment expect?




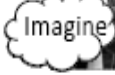
Imagine See what isn't there!



Selecting Alternative Behaviors Brandon

- ★ Let's assume the role of Brandon's mother
- ★ What are some acceptable alternative behaviors we would like to have Brandon perform at home?
- ★ Using the 5 + 5 + 5 let's talk about the desired behavior (s)
- ★ **REMEMBER:** Right now the challenging behaviors are maintained by obtaining an object (computer)





Imagine See what isn't there!

Establishing Goals Identify the Desired Behavior

5 good things _____ does now

-
-
-
-
-

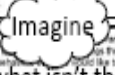
5 things I'd like to see _____ learn to do more often

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-
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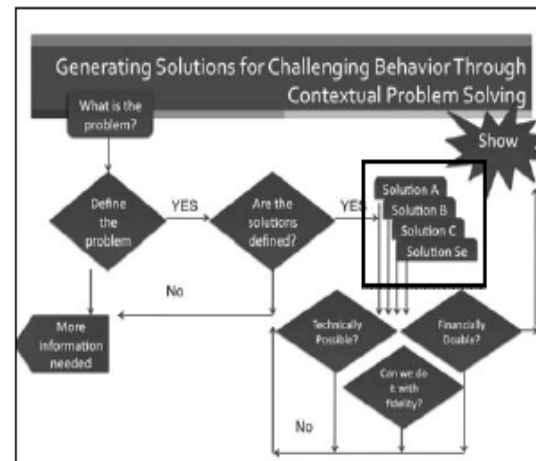
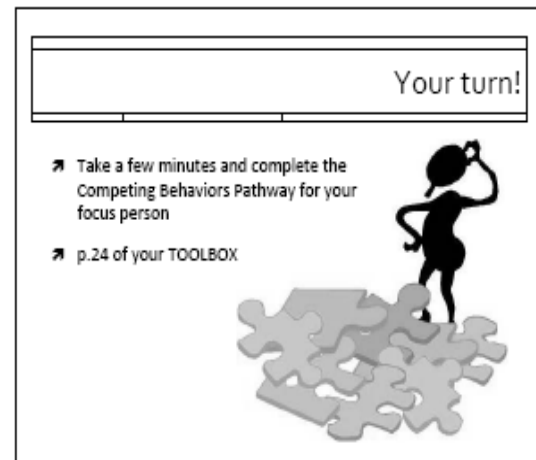
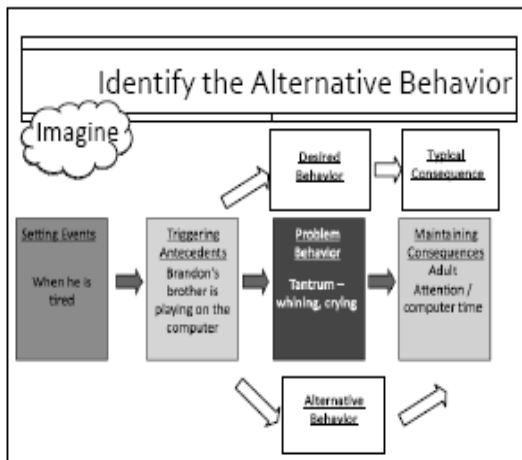
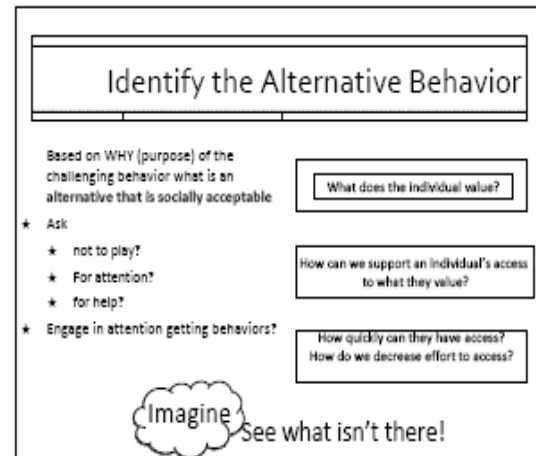
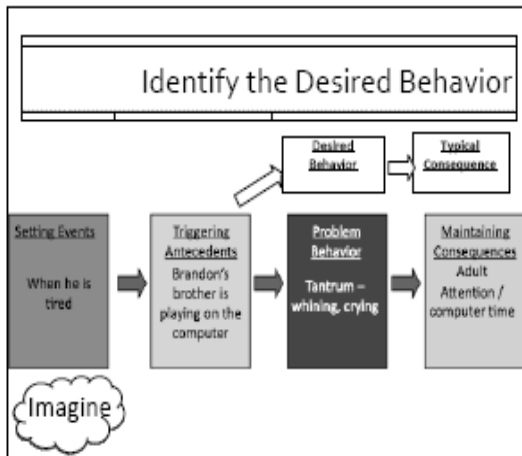
5 things I'd like to see _____ learn to do less often

-
-
-
-
-

Directions: Begin by listing in the left-hand column 5 desirable behaviors the child does regularly or sometimes, but should do with more regularity. Then, list in the right-hand column 5 behaviors the child does sometimes, but should do less frequently. (Things the child does sometimes, but should do less frequently.)



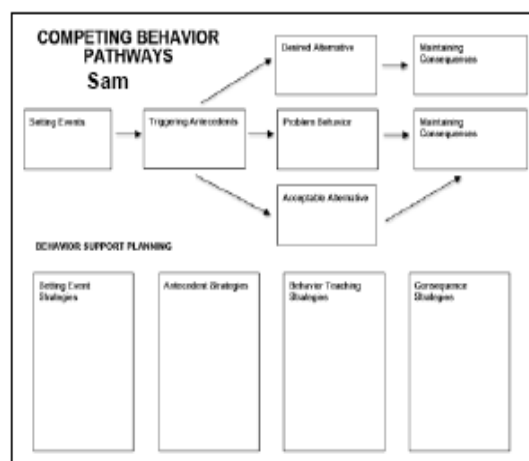
Imagine See what isn't there!



What we want to accomplish!

- Describe and engage in effective matching process
- Observe behavior in context
- Describe behavior in observable and measurable terms
- Use behavior and environmental language to describe behavior to be addressed
- Develop functional hypotheses to explain observed behavior
- Develop functional hypotheses based on behavior data
- Develop and test behavior observation forms to collect key hypotheses
- Observe and record behavior to conduct
- Develop necessary elements of behavior to conduct

- Use a competing behaviors pathway format as a "jumping off point" for behavior support planning
- Identify "basic" alternative and desired behaviors of specific relative value
- Identify necessary components for a functional and contextual behavior support plan
 - Describe prevention strategies as a "first defense" for BSP
 - Describe a skills training model for teaching alternative and desired behaviors
 - Identify "teaching" relationships to support new behaviors and maintain appropriate social behaviors
 - Select and use appropriate program monitoring & information data collection tools



Behavior Support Planning Necessary Components

| Setting Events | Triggering Antecedent | Teaching Behaviors | Maintaining Consequences |
|----------------|-----------------------|--------------------|--------------------------|
| Neutralize | Irrelevant | Inefficient | Ineffective |

What we want to accomplish!

- Describe and engage in effective matching process
- Observe behavior in context
- Describe behavior in observable and measurable terms
- Use behavior and environmental language to describe behavior to be addressed
- Develop functional hypotheses to explain observed behavior
- Develop functional hypotheses based on behavior data
- Develop and test behavior observation forms to collect key hypotheses
- Observe and record behavior to conduct
- Develop necessary elements of behavior to conduct

- Identify necessary components for a functional and contextual behavior support plan
- Describe prevention strategies as a "first defense" for BSP
 - Describe a skills training model for teaching alternative and desired behaviors
 - Identify "teaching" relationships to support new behaviors and maintain appropriate social behaviors
 - Select and use appropriate program monitoring & information data collection tools

Behavior Support Planning: Prevent

Setting Events

Neutralize

- ★ Design setting event strategies to eliminate or neutralize effects of antecedents.
- ★ So they have less impact on routines & reinforcers.

Behavior Support Planning: Prevent

Triggering Antecedent

Irrelevant

- ★ Design antecedent strategies to make occasioning antecedents ineffective.
- ★ So they no longer serve as signals for behavior.

Prevention: Make problem behavior irrelevant (environmental redesign)

Positive Climate/Culture

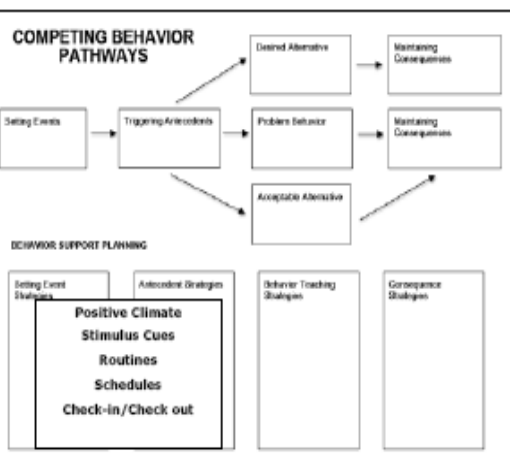
- ★ Keep the appropriate alternative and desired behavior in mind
- ★ Use a high ratio of positive to negative statements/interactions (between 4:1 to 7:1)
- ★ Keep the focus on what is going well
- ★ Minimize energy directed towards what you DON'T want to see

Prevention: Be the Change You Wish to See

- ★ Routines and Schedules
- ★ Communicate expectations
- ★ Rehearse expectations
- ★ Provide cues



| FIRST | THEN |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |



Prevention

Guess who's changing their behavior? It's us!

- ★ Change the context (Setting Event & Antecedent)
- ★ Change the presentation (Antecedent)
- ★ Change the behavior expectations & consequences
 - ★ Accept alternative behavior & increase access to the desired

What we want to accomplish!

- ★ Identify and assign to effective writing position
- ★ Assess behavior to current
- ★ Describe behavior to observable and measurable terms
- ★ Use behavior and contextual language to describe both behavior and context
- ★ Engage in effective, efficient & meaningful interaction
- ★ Build a functional approach based on behavior data
- ★ Build a viable behavior alternative term to replace problem behavior
- ★ Develop and record behavior to current
- ★ Build a necessary element of behavior to current
- ★ Use a competing behavior plan based on a competing alternative to current
- ★ Identify teaching behaviors and desired behaviors aligned with behavior plan
- ★ Identify necessary components for a functional and contextual behavior support plan
- ★ Describe presentation strategies as a "first choice" for BIP
- ★ Describe a skills training model for teaching alternative and desired behaviors
- ★ Identify teaching behaviors to support new behavior and maintain appropriate social behaviors
- ★ Select and use appropriate assessment methods & information data collection tools

Behavior Support Planning: Teach

Teaching Behaviors

- ★ Design behavior teaching strategies to make problem behaviors inefficient.
- ★ So more acceptable behaviors are easier to do.

Inefficient

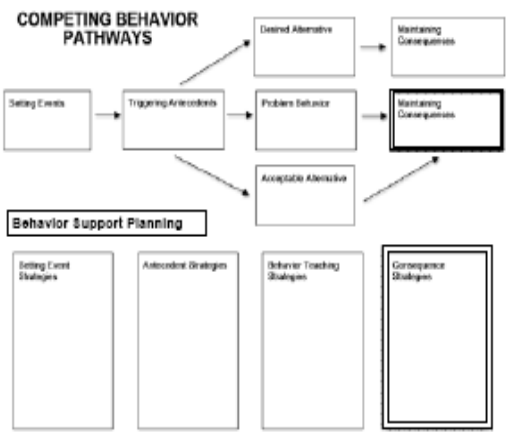
If YOU can't think of an alternative to difficult behaviors, chances are good the individual will have trouble learning one!

Therefore WE don't expect you to know how to say or do the skills training steps, but the steps and activity are there for the taking!

1. Identify and describe the skill
2. Discuss the importance and consequences of the skill
3. Define/discuss the skill steps with examples/nonexamples
4. Model the skill and role play with examples/nonexamples
5. Student practice with feedback
6. Review of skill
7. Reinforcement – alt behavior, problem behavior
8. Booster sessions – if needed repeat 1-6
9. Promote maintenance and generalization



- Identify and engage in effective existing practices
 - Assess behavior in context
 - Describe behavior in observable and measurable terms
 - Identify and maintain or attempt to describe the social learning environment
 - Develop effective and efficient measurement strategies
 - Develop contextual supports to sustain an intervention
 - Anticipate and balance or describe on how to anticipate hypothesis
 - Assess and ensure behavior is context
 - Develop necessary elements of behavior in context
- Determine how behavior is being measured
 - Determine if and how behavior is being measured
 - Determine if and how behavior is being measured
 - Determine if and how behavior is being measured
 - Determine if and how behavior is being measured
- **Identify necessary components for a functional and contextual behavior support plan**
 - Develop prevention strategies as a "9 on defense" for now
 - Develop and testing model for testing alternative and desired behaviors
- **Identify "overlay" reinforcers to support new behaviors and maintain appropriate social behaviors**
 - Select and use appropriate programs involving all relevant data collection tools



What's preferred does not always function (work) as a reinforcer!



Intervention Ideas For Behaviors Maintained by...

| | Task Avoidance | Peer Attention | Adult Attention |
|-------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------|
| ANTECEDENT | Pre-Correct Provide additional instruction/support Modify work to meet individual's skill level | Provide opportunities Adult assistance Group acknowledgment | Check in Check Out/Behavior Education Program Frequent adult attention |
| BEHAVIOR | Teach how to request a break Teach how to request from a menu of accommodations | Teach greetings/access behaviors Teach how to get attention/praise | Teach & Pre-Correct Differentiate Teach coping behavior |
| CONSEQUENCE | Consider incentive programs | Have a group incentive Set an individual goal | Respond Quickly |

Reinforcer Worksheet

Focus Person: _____ Date: _____


Describe Reinforcer:

Expects on Ability:

Type of Impact:

Values:

Notes:



Reinforcer Scheduling

What behavior is going to be reinforced?

Is the behavior naturally reinforcing?

Which reinforcer is going to be used? Are multiple reinforcers appropriate?

How will choice be offered?

Will reinforcement be withdrawn at the end of the task/behavior?

If within task reinforcement is required, what system will be used to demonstrate progress?

How often will the behavior be reinforced?



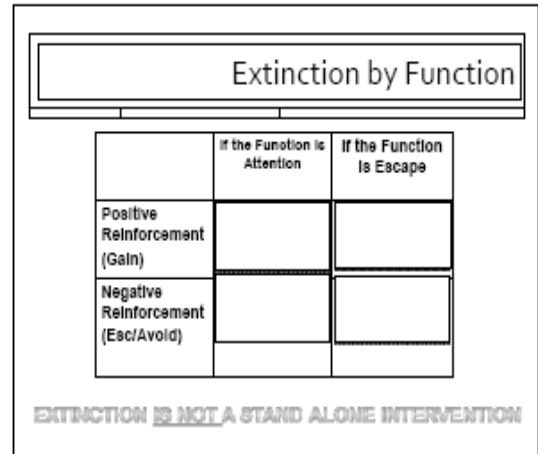
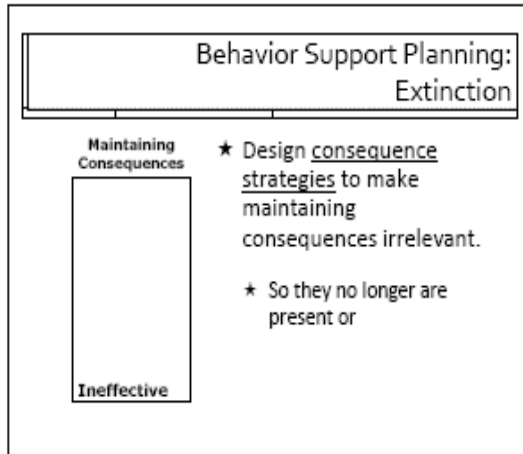

Use a system of reinforcement

Basic, concrete short time frame



Individualized \$\$\$ for more complex system

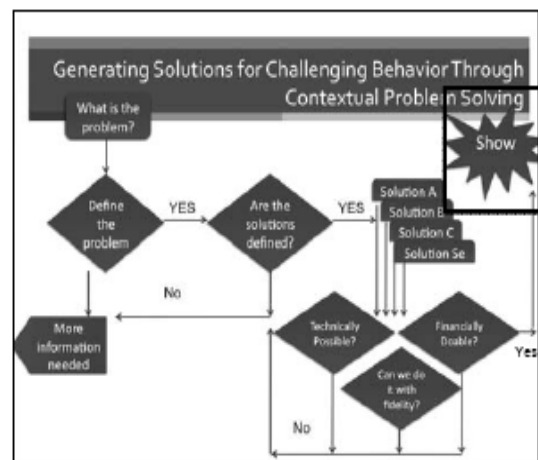
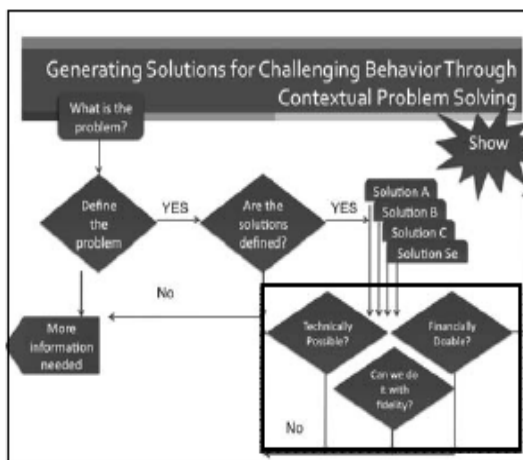




What we want to accomplish!

- 1. Describe and measure the effective existing problem
- 2. Measure extinction is effective
- 3. Describe the behavior to eliminate and assess its function
- 4. Describe the behavior to eliminate and assess its function
- 5. Describe the behavior to eliminate and assess its function
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- 99. Describe the behavior to eliminate and assess its function
- 100. Describe the behavior to eliminate and assess its function

Select and use appropriate progress monitoring & informative data collection tools



Behavior Support Planning & Refinement Use formal and Informal Check-Ins

| Check-In Form: | | | |
|----------------|--------------|--------------|---------------------------|
| | What's Done? | What's Next? | What are your next steps? |
| Y101 | | | |
| Date | | | |
| Y102 | | | |
| Date | | | |
| Y103 | | | |
| Date | | | |
| Y104 | | | |
| Date | | | |
| Y105 | | | |
| Date | | | |
| Y106 | | | |
| Date | | | |
| Y107 | | | |
| Date | | | |
| Y108 | | | |
| Date | | | |
| Y109 | | | |
| Date | | | |



Where do we go from here?

- You now have a great deal of information about the nature of the problem behavior
- The next step is to identify and implement appropriate interventions (www.asdcenter.org)



APPENDIX B

PBS TEAM TRAINING PARTICIPANT QUESTIONNAIRE

PBS Team Training Participant Questionnaire

Date Attended _____

| PRESENTER | | | | | |
|---------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
| The presenter was knowledgeable about the subject matter. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The presenter clearly communicated the subject matter. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The presenter was concerned with ensuring my understanding of the material. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| KNOWLEDGE AND SKILLS | | | | | |
| | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
| This training increased my knowledge about the topics presented. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am confident that I will be able to apply what I have learned. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The knowledge I obtained from this training session will be useful. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The skills I obtained from this training session will be useful. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| TRAINING COMPONENTS | | | | | |
| | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
| The objectives of the training were clearly stated. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The objectives of the training session were clearly achieved. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The materials provided were useful to meeting the session objectives. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The activities for the session were useful in achieving the session objectives. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Overall, I feel the session was valuable. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| COMMENTS: | | | | | |

APPENDIX C
DATA COLLECTION SHEETS

Data Collection Sheet

Name_____

Behavior_____

| Date | Time | Frequency of Behavior |
|-------------|-------------|------------------------------|
| | | |
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Data Collection Sheet

Name _____

Behavior _____

| Date | Start Time | End Time | Duration of Behavior |
|------|------------|----------|----------------------|
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APPENDIX D

PBS TEAM TRAINING OUTLINE AND RELATED OBJECTIVES

PBS Team Training Outline and Related Objectives

I. Function-based Interventions and Solutions

- a. reinforcement, punishment, setting events, antecedents, observable and measurable behaviors, and consequences
- b. relationship between environmental design and socially appropriate and challenging behavior
- c. components of a 4-term contingency

II. Contextual Problem Solving

A. Functional Behavior Assessment

- a. components (how) and outcomes (why) of the functional behavioral assessment process
- b. defining behaviors in observable and measurable terms
- c. components of an effective interview
- d. appropriate behavior observation form
- e. summary statement as a result of the functional behavioral assessment using Part 1 of the competing behaviors pathway diagram
- f. efficient and effective functional behavioral assessment interview
- g. hypothesis identifying the setting event, antecedent, behavior, and consequence
- h. possible alternative replacement behaviors and desired behaviors using the competing behaviors pathway form

B. Building a Behavior Support Plan

- a. setting events, antecedent, and consequence manipulations as a result of the functional behavioral assessment process
- b. technically adequate and financially doable behavior support plan
- c. skills training model to teach an acceptable alternative replacement behavior

APPENDIX E

PBS TEAM TRAINING CHECKLIST

PBS Team Training Checklist

Date of Training _____

| Item Being Reviewed | Check Here | Initial |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Reviewed and gave examples of: Reinforcement Punishment Setting events Antecedents Observable and Measurable Behaviors Consequences | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| Described the relationship between environmental design and socially appropriate and challenging behavior | <input type="checkbox"/> | |
| Described and gave examples of the components of a 4-term contingency | <input type="checkbox"/> | |
| Described and gave examples of the components (how) and outcomes (why) of the functional behavioral assessment process | <input type="checkbox"/> | |
| Described and gave examples of how to define behaviors in observable and measurable terms | <input type="checkbox"/> | |
| Identified the components of an effective interview and went through examples | <input type="checkbox"/> | |
| Reviewed various behavior observation forms | <input type="checkbox"/> | |
| Reviewed and gave examples on writing a complete summary statement as a result of the functional behavioral assessment using Part 1 of the competing behaviors pathway diagram | <input type="checkbox"/> | |
| Reviewed how to write a complete hypothesis identifying the setting event, antecedent, behavior, and consequence | <input type="checkbox"/> | |
| Provided time for the participants to: Draft a summary statement, and Identify possible alternative replacement behaviors using the competing behaviors pathway form | <input type="checkbox"/> <input type="checkbox"/> | |
| Identified and described setting events, antecedent, and consequence manipulations as a result of the functional behavioral assessment process | <input type="checkbox"/> | |
| Described the use of a skills training model to teach an acceptable alternative replacement behavior | <input type="checkbox"/> | |

APPENDIX F

PBS TEAM TRAINING PROCEDURAL FIDELITY CHECKLIST

PBS Team Training Procedural Fidelity Checklist

Date _____

_____ Follow Strategy Developed from Competing Behavior Pathways

_____ Followed Reinforcement Schedule

_____ Used Designated Prompting Method

_____ Provided Designated Reinforcer

_____ Reinforced Replacement Target Behavior

APPENDIX G

INFORMED CONSENT FORMS

RECEIVED
AUG 03 2009



INFORMED CONSENT

Department of Special Education

TITLE OF STUDY: Effects of a Collaborative Parent-Professional Positive Behavior Support (PBS) Team Training on Challenging Behaviors of Children with an Autism Spectrum Disorder

INVESTIGATOR(S): Susan P. Miller, Ph.D. and Traci Ruppert

CONTACT PHONE NUMBER: 895-1108

Purpose of the Study

You are invited to participate in a research study. The purpose of this study is investigate the effects of a collaborative parent-professional positive behavior support (PBS) team training on challenging behaviors of children (ages 2-10) with autism.

Participants

You are being asked to participate in the study because you provide related services to a child who is between the ages of 2 and 10, has a medical/educational diagnosis of an autism spectrum disorder and engages in at least three challenging behaviors.

Procedures

If you volunteer to participate in this study, you will be asked to attend one 7-hour training session with the parent of a child to whom you provide professional services. During this training session, you will work with the parent to develop a viable action plan for decreasing three challenging behaviors of the child and increasing appropriate replacement behaviors.

Benefits of Participation

There may be no direct benefits to you as a participant in this study. However, we hope as a result of the PBS team training you will increase your capability to assist parents of children who exhibit challenging behaviors. It is also hoped that the child to whom you provide services will improve behaviorally.

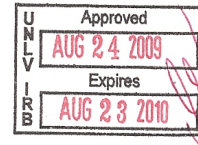
Risks of Participation

There are risks involved in all research studies. The risks of this study are minimal. It is possible that you will experience stress or fatigue during the 7-hour training session as a result of learning new information and collaborating with the parent. This risk will be minimized as much as possible through careful planning and implementation of a well-organized training session.

Participant Initials _____

RECEIVED

AUG 03 2009



INFORMED CONSENT

Department of Special Education

TITLE OF STUDY: Effects of a Collaborative Parent-Professional Positive Behavior Support (PBS) Team Training on Challenging Behaviors of Children with an Autism Spectrum Disorder

INVESTIGATOR(S): Susan P. Miller, Ph.D. and Traci Ruppert

CONTACT PHONE NUMBER: 895-1108

Cost /Compensation

There will be no financial cost to you to participate in this study. Attendance at the training session will require 7 hours of your time. You will not be compensated for your time.

Contact Information

If you have any questions or concerns about the study, you may contact Traci Ruppert at 702-895-5836 or Susan P Miller at 702-895-1108. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office for the Protection of Research Subjects at 702-895-2794.**

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

Confidentiality

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at UNLV for 3 years after completion of the study. After the storage time the information gathered will be destroyed and computer files erased.

Participant Initials _____

RECEIVED

AUG 03 2009



INFORMED CONSENT

Department of Special Education

TITLE OF STUDY: Effects of a Collaborative Parent-Professional Positive Behavior Support (PBS) Team Training on Challenging Behaviors of Children with an Autism Spectrum Disorder

INVESTIGATOR(S): Susan P. Miller, Ph.D. and Traci Ruppert

CONTACT PHONE NUMBER: 895-1108

Participant Consent:

I have read the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

Signature of Participant

Date

Participant Name (Please Print)

Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.

Participant Initials _____

RECEIVED
AUG 03 2009



PARENT PERMISSION FORM

Department of Special Education

TITLE OF STUDY: Effects of a Collaborative Parent-Professional Positive Behavior Support (PBS) Team Training on Challenging Behaviors of Children with an Autism Spectrum Disorder

INVESTIGATOR(S): Susan P. Miller, Ph.D. and Traci Ruppert

CONTACT PHONE NUMBER: 895-1108 (Dr. Miller)

Purpose of the Study

You and your child are invited to participate in a research study. The purpose of this study is to investigate the effects of a collaborative parent-professional positive behavior support (PBS) team training on challenging behaviors of children (ages 2-10) with autism.

Participants

You and your child are being asked to participate in the study because your child is between the ages of 2 and 10, has a medical/educational diagnosis of an autism spectrum disorder and engages in at least three challenging behaviors.

Procedures

If you volunteer to participate in this study, you will be asked to attend one 7-hour training session with one of your child's professional service providers (e.g., speech therapist, occupational therapist, home behavioral therapist). During this training session, you will work with the professional service provider to develop a viable action plan for decreasing three challenging behaviors that your child displays and increasing appropriate replacement behaviors. Following the training session, you will be asked to implement the action plan for improving your child's behaviors within your home environment for a total of 16 to 20 hours over approximately 4 weeks (depending on your child's progress). During these home sessions, the researcher will be present to watch you work with your child and to collect data related to the behaviors targeted for improvement. The sessions of you working with your child will be no longer than one-hour and each session will be video taped so that another researcher can re-observe the training sessions to be sure the behavior data were collected accurately.

Benefits of Participation

There may be no direct benefits to you or your child as a participant in this study. However, we hope as a result of the PBS team training and your implementation of strategies learned in the training session, you will feel better prepared to help your child learn appropriate behaviors to replace inappropriate behaviors. It is hoped that both you and your child will gain new skills that can improve the quality of your lives.

Participant Initials _____

1 of 3

RECEIVED
AUG 03 2009



PARENT PERMISSION FORM

Department of Special Education

TITLE OF STUDY: Effects of a Collaborative Parent-Professional Positive Behavior Support (PBS) Team Training on Challenging Behaviors of Children with an Autism Spectrum Disorder

INVESTIGATOR(S): Susan P. Miller, Ph.D. and Traci Ruppert

CONTACT PHONE NUMBER: 895-1108 (Dr. Miller)

Risks of Participation

There are risks involved in all research studies. The risks of this study are minimal. It is possible that you will experience stress or fatigue during the 7-hour training session as a result of learning new information and collaborating with a service provider that works with your child. This risk will be minimized as much as possible through careful planning and implementation of a well-organized training session. It is also possible that your son/daughter will experience stress and/or discomfort related to learning new behaviors to replace inappropriate behavior. This risk will be minimized, however, through the use of positive reinforcement for learning the new behavior. It is also possible that you will experience stress as you implement new skills for helping your child. These risks will be minimized as a result of improved behavior on the part of your child.

Cost /Compensation

There will be no financial cost to you to participate in this study. The study will take 23-27 hours of time. There will be no compensation.

Contact Information

If you have any questions or concerns about the study, you may contact Traci Ruppert at 702-895-5836 or Susan P Miller at 702-895-1108. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact the UNLV Office for the Protection of Research Subjects at 702-895-2794.

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

Confidentiality

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link your child to this study. All records will be stored in a locked facility at UNLV for 3 years after completion of the study. After the storage time the information gathered will be destroyed and computer files erased.

Participant Initials _____

2 of 3

RECEIVED

AUG 03 2009



PARENT PERMISSION FORM

Department of Special Education

TITLE OF STUDY: Effects of a Collaborative Parent-Professional Positive Behavior Support (PBS) Team Training on Challenging Behaviors of Children with an Autism Spectrum Disorder

INVESTIGATOR(S): Susan P. Miller, Ph.D. and Traci Ruppert

CONTACT PHONE NUMBER: 895-1108 (Dr. Miller)

Participant Consent:

I have read the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

Signature of Parent

Child's Name (Please Print)

Parent Name (Please Print)

Date

I give my consent for the UNLV Center for Autism Spectrum Disorders to videotape my child and for the videotapes to be reviewed for the purpose of research.

Signature of Parent

Child's Name (Please Print)

Parent Name (Please Print)

Date

Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.

Participant Initials _____

3 of 3



Social/Behavioral IRB – Expedited Review Approval Notice

NOTICE TO ALL RESEARCHERS:

Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

DATE: August 24, 2009

TO: Dr. Susan Miller, Special Education

FROM: Office for the Protection of Research Subjects

RE: Notification of IRB Action by Dr. Paul Jones, Chair *PJW*
Protocol Title: **Effects of a Collaborative Parent-Professional Positive Behavior Support (PBS) Team Training on Challenging Behaviors of Children with an Autism Spectrum Disorder**
Protocol #: 0906-3132M

This memorandum is notification that the project referenced above has been reviewed by the UNLV Social/Behavioral Institutional Review Board (IRB) as indicated in Federal regulatory statutes 45 CFR 46. The protocol has been reviewed and approved.

The protocol is approved for a period of one year from the date of IRB approval. The expiration date of this protocol is August 23, 2010. Work on the project may begin as soon as you receive written notification from the Office for the Protection of Research Subjects (OPRS).

PLEASE NOTE:

Attached to this approval notice is the **official Informed Consent/Assent (IC/IA) Form** for this study. The IC/IA contains an official approval stamp. Only copies of this official IC/IA form may be used when obtaining consent. Please keep the original for your records.

Should there be *any* change to the protocol, it will be necessary to submit a **Modification Form** through OPRS. No changes may be made to the existing protocol until modifications have been approved by the IRB.

Should the use of human subjects described in this protocol continue beyond August 23, 2010, it would be necessary to submit a **Continuing Review Request Form** 60 days before the expiration date.

If you have questions or require any assistance, please contact the Office for the Protection of Research Subjects at OPRSHumanSubjects@unlv.edu or call 895-2794.

Office for the Protection of Research Subjects
4505 Maryland Parkway • Box 451047 • Las Vegas, Nevada 89154-1047

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VITA

Graduate College
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Traci Elaine Ruppert

Degrees: Bachelor of Science, Psychology, 2007
University of Wisconsin, Eau Claire

Thesis Title: Effects of a Collaborative Parent-Professional Positive Behavior Support
Team Training on Challenging Behaviors of Children with Autism

Thesis Examination Committee:

Chairperson, Susan P. Miller, Ph.D.

Committee Member, John W. Filler, Ph.D.

Committee Member, Kristin L. Sayeski, Ph.D.

Graduate Faculty Representative, S. Kathleen Krach, Ph.D.