

Running Head: EVALUATION OF A FBA TRAINING PROGRAM

Functional Behaviour Assessment for a Student with Autism:

Evaluation of a Training Program for Teachers and
Education Program Assistants

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Abstract

With the education system moving towards an inclusive learning environment, more children with disabilities, including autism, have been included in regular education classrooms and schools. Autism is a neurodevelopmental disorder with significant impairments in social interaction, communication, and the presence of restricted, repetitive and stereotyped patterns of behaviour, interests, and activities. This move, while having positive results on the students, has caused some concerns around the best practices for dealing with challenging behaviours in the classroom. One method, Functional Behaviour Assessment (FBA), has been widely recognized as a promising practice for providing proactive interventions with students who exhibit challenging behaviours. FBA has also been shown to be an effective method for linking assessment to intervention. This is an important tool when developing Behaviour Support Plans (BSP). A Behaviour Support Plan is a written document that summarizes the information obtained from the Functional Behavior Assessment and outlines the intervention plan. As children with autism are at a particular risk for developing challenging and disruptive behaviours that interfere with their educational progress, FBA is an effective tool for developing Behaviour Support Plans that decrease challenging behaviours, while increasing prosocial behaviours.

However, there are concerns regarding the use of FBA practices and procedures within the school system. These concerns include the amount of time needed to perform a complex assessment and lack of training by those responsible for conducting the assessment. This study evaluated whether training school personnel in Functional Behaviour Assessment would lead to the development of a Behaviour Support Plan,

which would decrease a student with autism's challenging behaviour in the school setting. This study also demonstrated how FBA could be effectively implemented in the school system by supporting school staff throughout the training, assessment, and intervention stages.

Three school personnel and one student with autism participated in this study. School personnel received a six hour training session in FBA through verbal and written instructions and case study examples. During training, participants learned the fundamentals about function-based behaviour support, how to conduct a Functional Behaviour Assessment and how to build an effective and efficient Behaviour Support Plan. Once training had been completed, school personnel completed the FBA process on a student with autism. The assessment procedure involved collecting information regarding two target behaviours through interviews and observations and then developing a BSP based on the assessment information that was collected.

Observational information was collected after the BSP was implemented to determine if it had an effect on the student's behaviour. While the two target behaviours appeared to decrease after the BSP was implemented, the specific causes of these reductions were unable to be drawn due to the possibility of other variables accounting for the improved behaviour.

Results of FBA training revealed that school personnel's confidence level in their ability to develop and implement FBA procedures had increased after training. Discussion includes the potential benefits of training school staff to implement Functional Behaviour Assessment procedures and the Behaviour Support Plans that are

directly linked to assessment information, limitations of this study, and directions for future research in applied school practices.

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CHAPTER ONE

General Introduction and Literature Review

History and Definition

Autism was first systematically described by Leo Kanner in 1943. In his first seminal paper on autism, Kanner described 11 children who were socially isolated, with “autistic disturbances of affective contact,” impaired communication, and behavioural inflexibility (Kanner, 1943). Kanner gave detailed descriptions of the children’s behaviour but selected a few features critical for a diagnosis (Wing, 1996). These included a profound lack of affective contact with others; persistent desire for repetitive routines; marked abnormality in speech; intense attraction for manipulating objects; relatively strong visuo-spatial skills and rote memory; and an intelligent appearance. Later, Kanner suggested that the first two of these characteristics were sufficient for a diagnosis. Kanner believed that this condition was present at birth, or within the first 30 months of life.

Historically, it was believed that parents of children with autism had cold-parenting styles and had little social interest in others (Wing, 1996). However, in the 1960s, research into normal child development and language disorders had begun to identify the way the brain functions, which reported physical causes of autism, not parent child-rearing practices (Wing, 1996). Today, it is widely accepted that autism is a neurodevelopmental disorder with significant impairments in social interaction, communication, and the presence of restricted, repetitive and stereotyped patterns of behaviour, interests, and activities (American Psychiatric Association, 1994). Autism is also conceived as a spectrum disorder. Individuals with autism have deficits in all three

areas; however, individuals can vary significantly in the degree to which they are affected by behaviours associated with autism (Lord & Risi, 2000).

The prevalence rates of autism appear to have increased since the mid- 1960's (Fombonne, 2003). However, there are several factors that contribute to the observed increase. These include: changes in diagnostic criteria; differences in ascertainment methods used in the studies; growth in the awareness among parents, professionals and the general public of the existence of autism spectrum disorders; and recognition that autistic characteristics can be associated with a number of other disorders and levels of functioning (Wing & Potter, 2002). However, regardless of the reasons, prevalence rates for autism spectrum disorders have increased from the first epidemiological study. According to Chakrabarti and Fombonne (2005) a reasonable estimate for the prevalence of autism is 22 per 10,000.

There are a number of behavioural features associated with autism that are not crucial for a diagnosis. These include, but are not limited to, stereotyped movements such as flapping of the arms and hands, abnormalities of gait and postures, difficulties in imitating movements, unique responses to sensory stimulation, and presentation of inappropriate behaviours (Wing, 1996). Children with autism are at a particular risk for developing challenging behaviours due to their difficulties with social interactions and communication abilities (Fox, Dunlap, & Buschbacher 2000). These behaviours range from tantrums to self-injurious behaviour and aggression to disruptive or ostracizing self-stimulatory behaviours (Koegel, Frea, & Surratt, 1994).

Although high-intensity behaviours may have a low-frequency occurrence, the behaviour disrupts the environment enough to make them problematic (Koegel et al.,

1994). In other words, although the child's disruptive behaviour may be relatively uneventful for long periods of time, the challenging behaviours may still occur at seemingly unpredictable times with little provocation, which results in an interruption to the child's learning environment (Koegel et al., 1994). Challenging behaviour exhibited by children with autism is often a barrier to community participation, opportunities for social interactions with peers and family, and inclusive education (Fox, et al., 2000).

Education of Students with Autism

In Canada, the education system has made great progress over the past twenty years in the education of children with significant cognitive disabilities (Bryson, Rogers, & Fombonne, 2003). Historically, children with autism were placed in small, segregated classes that typically consisted of a mixture of children with mental disabilities, often in schools located outside of their communities. Treatments of maladaptive behaviours (e.g., aggression, self-injurious behaviour, and tantrums) were often based on default strategies such as relying on punishment procedures alone (Foxx & Azrin, 1973). Although some may argue that punishment procedures are effective in reducing or eliminating a variety of inappropriate and disruptive behaviours, the fact remains that the act of punishment is emotionally charged (Schreibman, 1994), which elicits an emotion, not a rational response (Matson & Sevin, 1994).

However, beginning in the 1980s, education policies began to change from segregation of students with mental disorders to systems that foster inclusion of these students into regular education schools and classrooms (Bryson et al., 2003). Dunlap and Fox (2004) describe inclusion as “providing unconditional opportunities for children with diverse abilities to participate actively in natural environments within their communities”

(p. 39). In other words, children in inclusive settings will have the opportunity to go to school along side their peers. They will spend time sitting beside, eating beside, playing beside, and learning beside typically developing children, and not solely with a group of children with disabilities. In this way, children with disabilities have a place where they belong, and can potentially develop friends and a sense of self-worth (Nickels, 2004). Successful inclusion has four major properties: 1) children with disabilities are able to attain the goals outlined within their Individual Program Plan (IPP); 2) children also make gains in their individual development by learning knowledge and skills outlined in the general education curriculum; 3) children have the opportunity to interact with their typically developing peers to acquire typical patterns of social development; and 4) successful inclusion means that the parents of these children are satisfied with the progress made (Cross, Traub, Hutter-Pishgahi, & Shelton, 2004).

With the inclusion of children with autism into general education classrooms, education staff have been presented with unique challenges in the development of effective instructional programs (Iovannone, Dunlap, & Huber 2003). Important responsibilities are placed on schools, teachers, related school professionals, and parents to determine the best educational interventions and practices that will allow each student with autism to make progress. Although researchers have not identified one approach that is better than another, efforts are aimed at identifying best practices for educating students with autism by placing equal emphasis on meeting students' social and emotional needs (Bryson et al., 2003; Howlin, 1998).

Several empirically validated interventions have been documented; however, students with autism are heterogeneous in their presentation of behaviours, interests, and

needs (Koegel, Koegel, Kellegrew, & Mullen, 2004). Therefore, difficulties in determining best education practices may not be universally related to the effectiveness of a particular intervention, but may also be related to a complex set of issues involving family variables, child characteristics, and the need to develop individualized support systems so that interventions can be tailored to the specific needs of the families' and the children's unique characteristics (Koegel et al., 2004). In addition to adapting specific educational strategies for students with autism, it is generally more productive to focus on the students' existing skills, rather than attempting to overcome fundamental deficits (Howlin, 1998).

Functional Behaviour Assessment

Traditionally, behavioural therapy has promoted the ABC (Antecedent-Behaviour-Consequence) approach to the analysis of behavioural problems (Howlin, 1998). After identification of the behaviour to be modified, attempts are made to outline the associated antecedents and consequences of that behaviour (Howlin, 1998). However, it appears that observational information alone does not always lead to the most effective form of intervention; in addition, it is difficult to establish the antecedents and consequences of the behaviour as perceived by the student (Howlin, 1998; Schreibman, 1994). For example, a student may begin to tantrum in a particular school setting because of a number of factors that occurred before the student came to school. In this case, observational assessment information alone is insufficient.

Because of these limitations in the traditional ABC approach to behaviour, a growing body of literature has been advancing in the fields of applied behaviour analysis, special education, and school psychology (Shapiro & Kratochwill, 2000). These fields

have advanced assessment procedures beyond the identification and descriptions of behaviours to a set of methodologies that identify what functions the behaviour is serving. Assessment methods that detect the function of aberrant behaviour have led to more effective treatments (Foxy, 1996), and have been deemed a valuable tool in developing successful individualized interventions for persons with severe disabilities who exhibit challenging behaviour (Scott, Liaupsin, Nelson, & McIntyre, 2005). The assessment procedure that has been used in the identification of variables in the environment that predict and maintain problem behaviours is referred to as a Functional Behaviour Assessment (O'Neill, Horner, Albin, Sprague, Storey, & Newton, 1997). Specifically, *Functional Behaviour Assessment (FBA)* is a process of identifying the purpose or function of a student's behaviour in relation to its surrounding environment so that appropriate interventions can be designed to meet the individual needs of the student (Iwata et al., 2000). O'Neill and colleagues identified five primary outcomes of the functional assessment process: (a) a clear description of the problem behaviour; (b) identification of the events, times, and situations that predict when the problem behaviours will and will not occur; (c) identification of the consequences that maintain the problem behaviour; (d) development of summary statements that describe specific behaviours, situations in which they occur, and the outcomes/ reinforcers maintaining the behaviour; and (e) collection of direct observation data that support the summary statements.

The goal of Functional Behaviour Assessment is to develop comprehensive hypotheses about the purpose or function of challenging behaviour (Fox et al., 2000). Understanding that challenging behaviour serves a purpose or function is the first step in

developing effective interventions. If the primary function of an inappropriate behaviour can be identified, it is then possible to provide the child with an alternative, more appropriate behaviour that serves the same function (Howlin, 1998). Many studies have demonstrated that challenging behaviours displayed by children with autism serve at least one of the following five primary functions: (1) gain attention; (2) escape from stressful situations or demands; (3) gain access to objects or activities; (4) protest against unwanted objects or activities; and (5) obtain stimulation (Durand & Carr, 1991; Reese, Richman, Zarcone, & Zarcone, 2003). Problem behaviours may also serve multiple functions and can occur across a number of settings and situations.

Functional Behaviour Assessment Process

There are three specific approaches for gathering functional assessment information. The first method is to conduct interviews with the person with challenging behaviours (if possible) and others who have direct contact with and knowledge about the individual (O'Neill et al., 1997). One of the most frequently used indirect assessment tools is the *Functional Analysis Interview* (FAI; O'Neill et al.). The FAI was designed to: (1) describe problem behaviours, (2) define environment and physical factors that result in the occurrence of the behaviour, (3) define the potential functions of the behaviour in addition to the consequences that maintain it, and (4) develop summary statements that describe the relationships among environmental factors, behaviours, and their functions (Johnston & O'Neill, 2001). The FAI is divided into eleven sections that help the interventionist in developing hypotheses regarding the motivating factors for the challenging behaviour(s), as well as providing information that will help design a plan to decrease the problem behaviour(s) (Johnston & O'Neill, 2001).

The second strategy for collecting functional assessment information is to systematically observe the individual with the challenging behaviour in his/her typical daily routines (O'Neill, et al., 1997). Indirect assessment tools such as observational strategies usually allow interventionists to develop an initial hypothesis about the initiating and maintaining variables for challenging behaviours (Johnston & O'Neill, 2001). Observational information could serve two primary functions, depending on the confidence of the interventionist in the initial hypothesis and their level of specificity. First, one might be able to provide confirmatory evidence for the initial hypothesis regarding the function of the problem behaviour(s); and second, the observations may provide additional information that can guide interventionists to develop more specific hypotheses if the function(s) were not fully understood or clarified. O'Neill and colleagues (1997) developed the *Functional Assessment Observation Form* (FAO), which detects the predictor events and consequences associated with occurrences of challenging behaviour. The FAO form is divided into eight major sections that assist the interventionist in documenting: (1) the number of events of problem behaviour; (2) the problem behaviours that occur together as well as the times when problem behaviours are the most and least likely to occur; (3) events that predict problem behaviours; (4) perceptions about maintaining functions of problem behaviours; and (5) actual consequences following problem behaviour events.

The third method for gathering information involves systematically manipulating specific variables that may or may not be directly associated with the challenging behaviour (O'Neill et al., 1997). Specifically, "functional analysis involves the direct and explicit manipulation of variables that are believed to maintain/influence the targeted

behaviour” (Murdock, O’Neill, & Cunningham, 2005; p.6). Two functional analysis approaches have been reported in the literature and have been used in applied settings. The first approach involves the manipulation of structural or antecedent events. This would include asking the person to participate in certain activities, conducting interactions in a particular setting, or presenting certain requests or instructions. The second approach focuses on manipulating consequences for the problem behaviour(s). In this case, different situations are constructed and specific consequences are provided contingent upon the occurrence of specific behaviours. If higher rates of behaviour are seen after a particular consequence is administered, then one can conclude that those consequences are maintaining the problem behaviour (O’Neill et al.).

Although there is research that demonstrates Functional Assessment as an effective methodology, these studies have been conducted in clinical settings and have often focused on individuals with severe developmental disabilities (Murdock et al., 2005). Little research has been dedicated to examining the utility of the Functional Behaviour Assessment procedures (Murdock et al., 2005; Johnston & O’Neill, 2001) in applied settings (e.g., school setting) and with different populations. In the absence of empirically supported data, school personnel must make well-informed decisions based on the functional assessment process and strategies used. Murdock, O’Neill, and Cunningham (2005) compared the results of Functional Behaviour Assessment procedures with eight junior high boys with behaviour disorders, using a teacher questionnaire, student interview, and the FAO. The authors found: 1) that teachers and students may not always agree in their perceptions of what challenging behaviours are causing the most difficulty; 2) both teachers and students found the assessment process as

helpful and acceptable in terms of their time and effort; 3) both teachers and students felt confident in the validity of summary statements concerning problematic behaviours; and 4) there can be agreement across descriptive methods of functional assessment information.

More specifically, Arndorfer, Miltenberg, Woster, Rortvedt, and Gaffaney (1994) employed the Motivation Assessment Scale (MAS) (Durand & Crimmins, 1988), the FAI (O'Neill et al., 1997), the FAO (O'Neill et al., 1997), and experimental manipulations with five preschool children who exhibited problem behaviours. The authors found good agreement among the FAI, FAO, and the experimental procedures, but not for the MAS. Similarly, Cunningham and O'Neill (2000) employed the MAS, FAI, FAO, and experimental functional analyses procedures with three preschool children with autism. The purpose of their study was to make recommendations to researchers and practitioners regarding the most effective and efficient methods for conducting assessments. Results demonstrated good agreement between indirect and direct methods in identifying primary functions or maintaining reinforcers of problem behaviours.

Positive Behaviour Support: Linking Assessment to Intervention

Functional Behaviour Assessment is an approach that matches the functions of challenging behaviour to individual treatment recommendations (Reese, et al., 2003; Crone & Horner, 2003). *Positive Behaviour Support* is a term used to describe a set of assessment and intervention procedures, based on person-centered values that are intended to decrease challenging behaviours and increase appropriate behaviours (Koegel, Koegel, & Dunlap, 1996). A Positive Behaviour Support plan is a written

record that summarizes the information obtained from the Functional Behaviour Assessment and documents the intervention plan based on the FBA (Crone & Horner).

Behavioural Support Plans are characterized by the following four features: (a) the plan indicates how staff, family, and related personnel will change and does not solely focus on how the individual of concern will change; (b) the plan is directly based on the functional behaviour assessment information; (c) the plan is technically sound- that is, based on behaviour principles and laws; and (d) the plan is a good fit with the values, resources, and skills of the people responsible for implementation (contextual fit) (O'Neill et al., 1997). After the initial Behaviour Support Plan is developed, an evaluation of the effectiveness of the plan is scheduled to integrate any changes into the initial plan design (Crone & Horner, 2003). Without systematic evaluation of the support plan, objective means of evaluating whether the plan has been successful or worthwhile is unable to occur.

Functional Behaviour Assessment and Autism

Functional Behaviour Assessments have been found to be effective in identifying the function(s) of inappropriate behaviour(s) and have led to more effective treatment plans for individuals with autism. In a study conducted by LaBelle and Charlop-Christy (2002) naturalistic observations and an experimental analysis were conducted with three young boys with autism. The authors found that the target behaviours for the three children were maintained by multiple functions, as well as changing functions depending on the observed session. In addition, the results of the study enabled the authors to develop effective treatment plans for each child that would eliminate, alter, or compete

with the contingencies responsible for maintaining the inappropriate behaviours (LaBelle et al.).

A study conducted by Cunningham and O'Neill (2000) found similar results. The authors used a general teacher questionnaire, the MAS, FAI, FAO and experimental functional analysis with three young children with autism. The authors found good agreement among the assessment procedures in identifying the primary and secondary functions of problem behaviours. In effect, treatment recommendations would be tailored to the specific functions identified.

In recent years, a few research articles have demonstrated the effectiveness of functional behaviour assessment in schools in the reduction of challenging behaviours (Fox & Davis, 2005; Watson, Ray, Turner & Logan, 1999). For example, a study conducted by Watson and colleagues (1999) trained teachers to conduct functional analysis and then implement treatments based upon the results of the analysis with a student. The student was a ten year old male, who met the criteria for Severely/Profound Mentally Disabled. He was referred for treatment due to high rates of self-injurious behaviours. Results indicated that the integrity for both the analysis and intervention were high and the targeted self-injurious behaviour was reduced to near zero after the intervention was implemented.

However, the assessment process within the public education system is not void of criticism. There are three primary reasons why functional assessments are not conducted more frequently in the education system. The first reason is the perception that the Functional Behaviour Assessment procedure is too time consuming and complex to perform (Asmus, Vollmer, & Borrero, 2002). Second, while FBA may be highly

effective in controlled settings, there are questions regarding whether the analysis used in such contexts can be generalized to other, more naturalistic settings (Sasso et al., 1992). The third reason is of particular interest to this study, which involves the lack of training by those responsible for conducting the FBA (Asmus et al.; Sasso et al., 1994).

Although the FBA process may be time consuming, the direct benefits of a thorough assessment procedure may outweigh the amount of time needed (Asmus et al., 2002). For example, consider the amount of time spent on an original treatment plan in addition to the time needed to refine flawed treatment plans that were not based on interviews, observations, and functional analyses. Even if the amount of time spent on the FBA process equals the time spent re-developing inadequate treatments, the process still provides those conducting the assessment with information regarding the function of why the behaviour is occurring (Asmus et al., 2002). As well, by involving teachers and others who work directly with the student in the FBA process, a more naturalistic environment may be created (Watson et al., 1999). This, in turn, can create a more ecologically valid functional assessment as training teachers allows them to employ the FBA methodology in the classroom in the absence of the psychologist (Watson et al., 1999).

Lack of training of those responsible for implementing the FBA process is a current concern and roadblock to the proactive use of FBA in the public school system. This has led to problems that occur at various stages throughout the assessment process. Problems such as not identifying the correct target behaviour and the function of the inappropriate behaviour have led to ineffective and poorly designed Behaviour Support Plans (Van Acker et al., 2005). Van Acker and colleagues (2005) reviewed 71

Functional Behaviour Assessments and Behaviour Support Plans submitted by school personnel who had and had not received in-service trainings in Functional Behavior Assessment and Behavior Support Plan development. School staff completed a one-day general training seminar that focused on the functional assessment of behaviour and the development of behavioural intervention plans (BIP). A two-day follow-up training seminar was also provided that focused on the identification of the function of the behaviour from the information collected and the development of the BSP.

The results indicated that the majority of the FBAs submitted displayed major flaws. The major shortcomings identified in this study would likely result in poorly designed behaviour support plans. The major findings of this study included: (1) the majority of the FBAs/BSPs submitted displayed problems in one or more critical areas, the most common was the failure to identify or define the target behaviour (70%); (2) 25% of FBAs submitted failed to identify the hypothesized function of the target behaviour; (3) the majority of FBAs (61%) did not attempt to verify the proposed function of the target behaviour before behavioural support plans were developed; (4) almost half of the BSPs used aversive intervention strategies to address the target behaviour (46%); and (5) FBA teams that included at least one member trained in the FBA/BSP process appeared to have improved performance with fewer flaws in critical areas. Based on these findings it appears that more training and education related to the FBA/BSP process is warranted. Although school staff who were trained produced significantly better FBAs/BSPs in general, a number of teams with trained members still demonstrated difficulties in a number of key areas.

Functional Behaviour Assessment Training and Implementation Issues

Questions regarding the procedures involved in training school personnel and the effects of such training are necessary questions in order to identify the most effective and efficient methods of conducting FBAs in the school system (Scott et al., 2005). In other words, questions surround how to train school personnel such that the skills learned are applied appropriately and effectively. There are a number of barriers and concerns regarding training school staff in FBA (Scott, Nelson, & Zabala, 2003), and efforts have been made in defining and implementing the “best practices” for staff delivery of FBA. Scott and colleagues (2003) recommended five major features that should be incorporated in the team training process: 1) facilitate systemic change; 2) multidisciplinary team collaboration; 3) case study/ practical format; 4) comprehensive and dynamic; and 5) provide ongoing support and feedback.

Facilitate Systemic Change

Team training in FBA must address broader system issues that may affect the ongoing support of the direct care staff, in addition to the persons whom the program is designed to support (Dunlap, et al., 2000). The degree to which organizational features of a school system promotes proactive behaviour support is a critical factor in the effectiveness and longevity of the program. Scott, Nelson, and Zabala (2003) identified four properties that must be shared among school personnel before systemic change will occur. In order for organization change to be supported, school staff must share a common dissatisfaction with the process and outcomes of the current system. For example, some members of a school may believe that high rates of expulsion are necessary in order to discipline problem behaviours, despite evidence contradicting their

use. In such cases it may be more difficult to implement new treatment methods that are seen as “too soft”. It may be necessary to predict potential objections and misconceptions, and then gather evidence and present a case that effectively responds to such issues.

Second, school personnel must also share a vision of what they would like to see in replace of the current practices. Even if every staff member believes that expulsion is not the desired outcome, not everyone will agree on what should be done instead. In addition to pre-correcting misperceptions via an array of evidence based examples, it should be pointed out that proactive intervention methods are far less time-consuming than purely reactive methods. Another consideration to be made before systemic change can occur is to address the practical steps for implementing change. These include the training curriculum for adopting FBA into the current system, such as developing teams, determining problem behaviours, creating successful environments, and monitoring progress.

The forth and final feature is to address concerns about the cost of procedural changes. For example, transitioning to a collaborative proactive system may be perceived as threatening for two reasons. First, change requires effort, time and commitment; and second, change may be perceived as increasing personal accountability of those involved. In addition to correcting misconceptions about the effectiveness of collaborative FBA, the process should also be described as a system that helps to provide teachers and students with the necessary supports to create effective intervention plans and not as a means to identify poor teachers.

Multidisciplinary Team Collaboration

By training multiple audiences, a coordinated support system is created across a variety of agencies, and community and family members (Dunlap, Robbins, Morelli, & Dollman, 1998; as cited in Anderson, Russo, Dunlap, & Albin, 2004). These individuals have the most impact over various aspects of the lives of the individuals with whom the positive support program was designed. Working collaboratively has been demonstrated to be a cost-effective team-based problem-solving procedure that increases interaction and cooperation among faculty and parents, while meeting the individual needs of the student (Chandler, Dahlquist, Repp, & Feltz, 1999). For example, Chandler and colleagues provided 16 hours of FBA training to classroom-based teams in preschool classrooms. The authors found positive student outcomes and maintenance of training procedures based upon team-based FBA. Establishing and maintaining collaborative interactions is an essential emphasis of team training. Each team member may have his/her own goal for his/her involvement, such as designing effective interventions and/or technical assistance in his/her own programs. Therefore team training teaches participants to function as a unit (i.e., collaborate) to meet the objectives of the training and to design effective interventions.

Case Study/ Practical Format

Through a case study format, participants work together to address and focus on the needs of the individuals with whom they work. This provides participants with an opportunity to apply their new skills and knowledge and then design a Behaviour Support Plan based on what they have learned (Dunlap et al., 2000). A case study format focuses on three major objectives. First, there is an ongoing emphasis on addressing the unique

characteristics of the individual. Second, support plans are then developed to fit within the environments in which they will be used, and are deemed acceptable by those implementing them. Third, applying new strategies directly allows participants to see the outcomes and benefits of the training program while still in process, which allows ongoing collaboration, feedback, and support from training personnel.

Comprehensive and Dynamic

The team training curriculum of FBA should be dynamic and comprehensive in nature. This includes presenting training material that is interspersed with opportunities for supported application of the concepts and skills (Dunlap et al., 2000; Van Acker et al., 2005). In addition to understanding the values, theory, and research underlying FBA, participants should gain direct experience with the content through ample examples, practice and feedback. For example, trainers should use a variety of formats, such as lectures and guided discussion, presentation of case examples (e.g., videotapes, case analysis), group activities, and role play.

Ongoing Support and Feedback

Direct methods of instruction that include the use of monitoring and feedback with personnel are necessary tools to teach new FBA skills and to ensure high levels of treatment integrity (Watson & Robinson, 1996). In this way school personnel, family members, and related professionals have continual access to consultation when problems arise. Formalized support and feedback procedures have been found to have a large impact on staff behaviour and the quality of FBA and Behaviour Support Plans (Ager & O'May, 2001). For example, Ager and O'May reviewed 103 intervention outcome studies to identify the "best practices" for intervention of challenging behaviour. Over

half of the reported studies did not provide any information on follow-up; therefore no data were provided on the durability of any gains made during intervention. The authors reported that such data were imperative in order for interventions to be considered having a significant therapeutic effect versus temporary treatment solutions. Maintaining long-term involvement also communicates to those involved that the treatment process was worthwhile and necessary to provide lasting changes for that child (Asmus et al., 2002).

Purpose and Description of Present Study

Based on the literature, there appears to be an increasing need to train and educate school personnel in Functional Behaviour Assessment to manage problem behaviours effectively. The purpose of this study was to evaluate whether training school personnel in Functional Behaviour Assessment would lead to the development of a Behaviour Support Plan (BSP), which would decrease a student with autism's challenging and problem behaviour in the school setting. It was also to demonstrate how FBA could be implemented effectively in the school system by supporting the staff throughout the training, assessment, and intervention stages. While a number of "best practices" of Functional Behaviour Assessment and Behaviour Support Plans have been identified in the literature, there is a lack of research examining FBA training programs. Therefore, the present study attempts to incorporate the identified "best practices" in the design and implementation of a FBA training program with one student with autism.

The following hypotheses were formulated to help determine the efficacy of the FBA training program:

Hypothesis 1. A Behaviour supports plan designed after FBA training lead to a decrease in negative, problem behaviours in a student with autism.

Hypothesis 2. School personnel will feel confident in their abilities to implement FBA procedures after FBA training.

CHAPTER TWO

Method

Participants and Setting

Three school personnel (Classroom teacher, Speech Language Pathologist, Education Program Assistant) and one student with autism participated in this study. All interventions were conducted in a public elementary school in Nova Scotia, Canada. The student will be hereafter referred to as Christopher, a pseudonym. Christopher was a nine year old male who had been diagnosed with autism by a mental health professional using Diagnostic and Statistical Manual of Mental Disorders- Forth Edition (DSM-IV) criteria (American Psychiatric Association, 1994). Christopher was referred to participate in this study by his two enhancement classroom teachers, based on challenging and disruptive behaviours that he was exhibiting. These behaviours were interfering with his educational progress and classroom participation. Christopher attended an enhancement classroom for the majority of the school day. The enhancement classroom had two classroom teachers, five Educational Program Assistants, and five other children with similar needs. Activities during these times included: circle time, calendar, speech and language therapy, individual seat work, structured play in sensory room, movement time, and centers (see Table 1 for complete schedule). Three times a day, Christopher attended his regular grade one education classroom with his peers for short periods, averaging 1.5 hours per day.

Christopher was nonverbal but used a few gestures and a picture exchange communication system (PECS) of Bondy and Frost (1996) to communicate his wants and needs. For example, he was able to lead an adult to a desired object and use a picture to

represent a desired object. Individuals, who use PECS, give a picture of a desired item to a communicative partner in exchange for that item. The goal of this program is to teach individuals who are not yet initiating requests or comments, to spontaneously initiate communicative exchanges. Christopher required substantial physical and visual prompts paired with verbal directions to complete most self-care and academic tasks and activities. The school personnel that participated in this study included Christopher's EPA, his enhancement classroom teacher, and his speech and language pathologist who also served as the enhancement classroom teacher and autism consultant for the school board region.

The primary facilitator was the author of this study, a master's student in School Psychology, who had completed coursework in consultation, Functional Behaviour Assessment and behavioural interventions. She also had experience and training in applied behaviour analysis for children with autism. The co-facilitator of the training program was a Registered Psychologist and a School Psychology faculty member who had experience in conducting functional behaviour assessments and functional analyses.

Table 1

Christopher's daily schedule

Time	Activity
8:15	Arrival
8:20	Snack
8:30	Circle time
8:45	Calendar HWT
8:55	Speech/enhanced
9:10	Classroom
9:35	Snack
9:55	Recess
10:10	Gym/music
10:30	Bathroom
10:35	Seat work
10:50	S.I. room
11:05	Classroom visit
11:20	Bathroom
11:25	Listening centre
11:30	Lunch
11:45	Book time
11:55	Play
12:20	PM circle time
12:30	Movement time
12:40	Centres
12:50	Recess
1:15	Bathroom classroom visit
1:35	Ind. Baskets
1:50	Rocking bench or computer
1:55	Prepare for home
2:00	dismissal

Procedure and Measures

The primary facilitator met with the school principal to determine if school staff would be interested in participating in this study, and to verify if there was a student fitting the participation criteria. Participation criteria included a student with a primary diagnosis of autism, absence of co-morbid disorders and concerns regarding challenging behaviours within the classroom. Once the school principal and school staff agreed to participate in the study, the primary facilitator met with school staff to review and sign the school principal and school staff consent letters (See Appendix G). The classroom teachers identified a student that may benefit from participation in this study and contacted the student's parents. The primary facilitator, school staff and school principal met with both of Christopher's parental guardians to discuss and sign the informed consent forms. This study consisted of four phases: 1) training; 2) pre-intervention; 3) development of Behaviour Support Plan; and 4) post-intervention and was a single-subject design.

Phase One: Training

Once this study had passed through the school board and university ethics committees, the three school personnel then received a six hour training session in FBA led by the primary facilitator and co-facilitator. The goal of this training program was to give participants the skills to implement Functional Behaviour Support in the school setting and to provide enough examples and practice so that participants had a thorough understanding of the FBA procedures and how it could fit into their current behaviour support system in the school.

Prior to the training session, school staff were asked to fill out a Pre-Training Assessment Questionnaire (see Appendix A) (Crone et al., 2002) to obtain a baseline measure of their current understanding and knowledge of FBA. The questionnaire included nine questions that asked participants to self-evaluate their ability and confidence in implementing FBA procedures by using a five point Likert scale (1- strongly agree, 2- agree, 3- disagree, 4- strongly disagree, and 5- don't know). For example, participants were asked to rate themselves regarding how confident they were in conducting classroom observations and documenting Antecedent-Behaviour-Consequence information, and how confident they were in conducting function-based interviews with teachers, parents and students.

The FBA training workshop was adapted from a program developed by Crone, Bergstrom, Borgmeir, & Hawken (2002) and was divided into three parts. In part one, participants learned the fundamentals about function-based behaviour support. In part two, participants learned how to conduct a Functional Behaviour Assessment and had opportunities to practice using FBA tools, such as the Functional Behaviour Assessment Interview (FAI) (see Appendix E) and the Functional Assessment Observation Form (FAO) (see Appendix D) (O'Neill et al., 1997). Finally, part three demonstrated how to build an effective and efficient Behaviour Support Plan that was directly linked to the Functional Behaviour Assessment information that was collected.

Throughout the three training components, participants were given the opportunity to practice newly developed skills through a variety of activities. Participants were encouraged to work as a team and to keep Christopher in mind when completing activities. Christopher served as their case example throughout the training

program. By the conclusion of the workshop, participants had gone through the entire FBA process (with the exception of observations) for this case example. Once FBA training was completed, school staff were then asked to fill out a Post-Training Assessment Questionnaire (see Appendix B) to obtain post-training information of their understanding and knowledge of FBA after FBA training. A Workshop Evaluation Survey (see Appendix C) was also administered to gather information regarding how useful and organized the workshop was and to indicate any suggestions regarding future improvements. This survey consisted of nine questions and required participants to rate their opinions using a five point Likert scale.

Phase Two: Pre-Intervention

Following the workshop, school personnel were asked to complete the FBA process with Christopher. The primary facilitator completed the Functional Assessment Interview (FAI) (O'Neill et al., 1997) with Christopher's Education Program Assistant and classroom teachers. Both of Christopher's parental guardians were interviewed by the primary facilitator and the classroom teachers. The interview consisted of asking caregivers and school staff to define problem behaviours and estimate the frequency and duration of these behaviours. They were asked questions regarding medications, medical/physical conditions, sleeping and eating, and schedules and routines.

From the interviews, a target behaviour was identified to be "dropping to the floor" which was defined as lying down on the floor and not standing up when directed. A meeting was conducted after the interviews were completed to determine summary statements regarding the functions of Christopher's "dropping to the floor" behaviour, which would define the problem behaviour for observation.

In conjunction with the interview, Christopher's EPA and the primary facilitator collected observational data during typical classroom activities using the FAO form, an event based recording format (O'Neill et al., 1997). Initial observations were collected by the primary facilitator for two hours per day for two days. Christopher's EPA continued to collect observational information across the entire day (8:00 a.m. - 2:00 p.m.) for 15 days. For each occurrence of problem behaviour the EPA and primary facilitator used the observation form to record specific behaviours, antecedents, perceived function(s) (e.g., escape, attention), and the actual consequences that were provided.

During the first week of observations, a second target behaviour was identified in addition to the primary target behaviour of "dropping to the floor", which had rapidly decreased after the interviews. The second target behaviour was defined as "agitation and crying" that occurred upon arriving at school in the morning. This behaviour did not coincide with "dropping to the floor". Observations were collected on both target behaviours over a three week period.

Phase Three: Development of Behaviour Support Plan

After observations and interviews had been completed, the school staff and primary facilitator met to discuss the results and to develop remediation strategies that would be built into the BSP (see Appendix F). During this meeting, strategies were discussed about how to reduce the target behaviours and increase prosocial behaviours. The primary facilitator assisted the school staff in developing a BSP based on the assessment information collected and hypotheses discussed in the meetings. The behaviour support plan included the following: an operational description of the problem behaviours; summary statements that are a direct result of the FBA; approaches for

making problem behaviours irrelevant, inefficient, and ineffective (e.g., setting events strategies, immediate antecedent strategies, instructional interventions, consequence interventions); descriptions of the child's typical routines and most difficult problem situations; and a monitoring and evaluation plan to ensure efficacy (O'Neill, et al., 1997). The primary facilitator called Christopher's parental guardians to discuss the results of the observations and the Behaviour Support Plan before the intervention was implemented.

Phase Four: Post-Intervention

The Behaviour Support Plan was implemented and post-intervention observations were collected for a period of 20 days (4.5 weeks). Christopher's EPA continued to collect observational information using the FAO form (O'Neill et al.) and anecdotal records for the remainder of the school year for both target behaviours. The primary facilitator met with Christopher's EPA on a weekly basis to observe implementation of the BSP, discuss how the plan was working, and offer feedback and support. The BSP was modified 11 days after initial implementation to meet Christopher's individual needs and ability level.

The primary facilitator, school staff, school principal, and Christopher's parental guardians met at the end of the school year to discuss the results of the interventions developed in the Behaviour Support Plan. A copy of the BSP was sent to Christopher's parental guardians, enhancement room teacher, school and school psychologist.

CHAPTER THREE

Results

The results for quantitative and qualitative data are presented for the pre-intervention, intervention, and post-intervention phases. Quantitative data includes information collected from the functional assessment observations and pre/post- training assessment questionnaires. Qualitative data includes information collected from the functional assessment interviews, workshop evaluation surveys and antidotal reports from Christopher's EPA.

*Training**Pre/Post Assessment Training Questionnaires*

Figure 1 displays the results of the pre and post training assessment questionnaire. Paired-sample t-tests were used to compare three respondent's means for questions one through nine on the Pre-Assessment Training Questionnaires and questions one through nine on the Post-Assessment Training Questionnaires. This evaluated the hypothesis that school personnel will feel confident in their abilities to implement FBA after training, as measured by the Pre and Post Assessment Training Questionnaires. School staff rated themselves as having an increased understanding and knowledge base of function-based support after training. For example, participants indicated that they strongly agreed that they understood the environmental sequence events (setting event- antecedent-behaviour- consequence) and how the sequence is used to determine the function of problem behaviours. School personnel also rated themselves as having an increased confidence level after FBA training in their ability to develop and implement FBA procedures (e.g., interviews, observations, Behaviour Support Plan development) and

with which students function-based support is most appropriate. The mean rating for the Pre-Assessment Training Questionnaire was ($M=17$, $SD= 1.00$) and for the Post-Assessment Training Questionnaire was ($M= 35$, $SD= 2.65$). This increase was statistically significant $t(2) = 18$, $p < .05$.

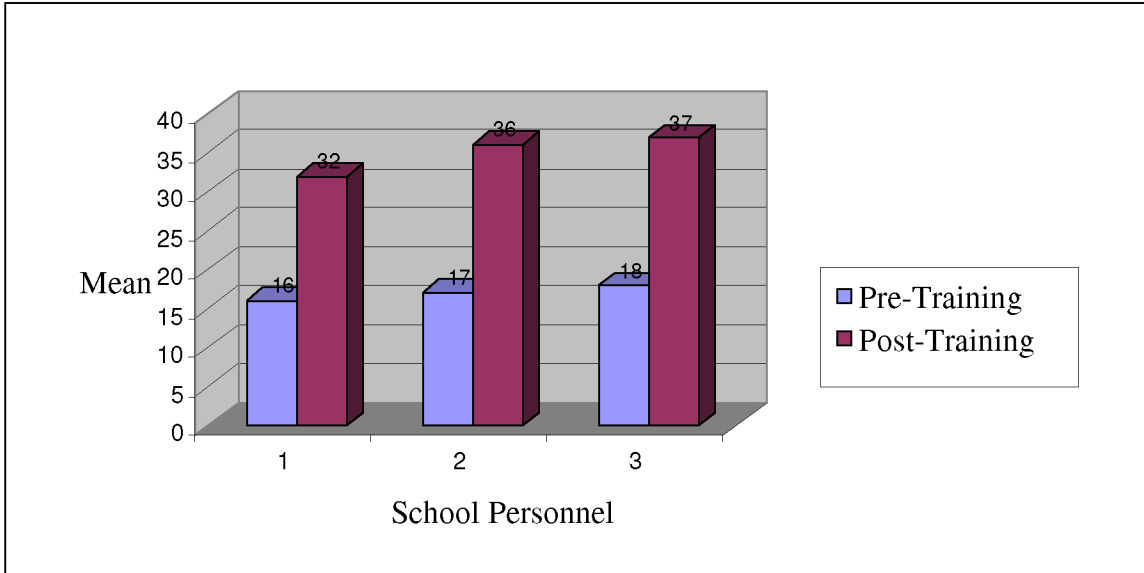


Figure 1. School Personnel Self-Evaluation of Confidence in FBA.

Workshop Evaluation Survey

Overall, participants rated the FBA training workshop as useful, well-organized, and easy to understand. All school personnel strongly agreed that their skills in function-based behaviour support improved as a result of their participation in the workshop. In addition, participants strongly agreed that function-based behaviour support would improve the quality of the Behaviour Support Plans that they would develop for their students. When asked in what ways the workshop was helpful, two participants indicated that FBA would be useful to identify problematic behaviours and they found the case study examples presented in the workshop the most helpful. School personnel were also asked to identify any suggestions they had to improve the workshop for future presentations. They did not suggest any improvements related to FBA training or presentation of materials.

*Functional Behaviour Assessment**Functional Assessment Interviews*

The results of the Functional Behaviour Assessments revealed several patterns. The results from the two functional assessment interviews (O'Neill et al., 1997) conducted with school staff reported that the target behaviour for Christopher (dropping to the floor) typically occurred 3-10 times per day during four specified periods. Christopher's EPA indicated that this target behaviour was most likely to happen: 1) in the hallway outside of the enhancement room, when he first arrived in the morning (8:15am); 2) on his way to his regular education classroom (9:10 am); 3) afternoon circle time (12:20); and 4) when he was asked to come in from the afternoon recess, which followed by attending his regular education classroom (1:10pm). School personnel also

indicated times when this target behaviour was least likely to occur. These included gym, music, and time spent in the sensory and enhancement rooms. School staff also stated that the target behaviour, which occasionally coincided with hitting, had been occurring for one month. Prior remediation to the target problem behaviour included ignoring the behaviour or picking him up from the floor and then leading him to the desired area. School personnel revealed that these strategies did not have an effect on Christopher's behaviour. Christopher's parents indicated that they did not see these patterns of behaviour at home and were only mild at best.

The results from the interviews suggested that Christopher "dropped to the floor" during transition periods. The transition periods that Christopher dropped to the floor occurred when he was asked to perform a least preferred activity (e.g., attend regular classroom, participate in afternoon circle time). These periods indicated that his target behaviour may be serving an escape function. It was also hypothesized that Christopher's "dropping to the floor" behaviour was maintained by the sensory stimulation that he was receiving as he was often physically picked up from the floor. Christopher also dropped to the floor when he first arrived in the morning. This suggested that the transition from home to school may be difficult for Christopher and he wanted to escape from the demands of his school day.

Functional Assessment Observations

Results from the functional observation form (O'Neill et al., 1997) were less conclusive. One week after FBA training, Christopher was observed at school during his typical daily routines for three weeks prior to intervention. The rate of Christopher's identified target behaviour became infrequent and a secondary problem/target behaviour

was identified at that time. Christopher was observed to arrive at school agitated, upset and often crying. These behaviours did not always coincide with “dropping to the floor”. Christopher’s EPA continued to collect observational information for the duration of the pre-intervention phase for both target behaviours. Figures 2 and 3 displays the instances of Christopher’s primary and secondary target behaviours for all seven weeks of observation.

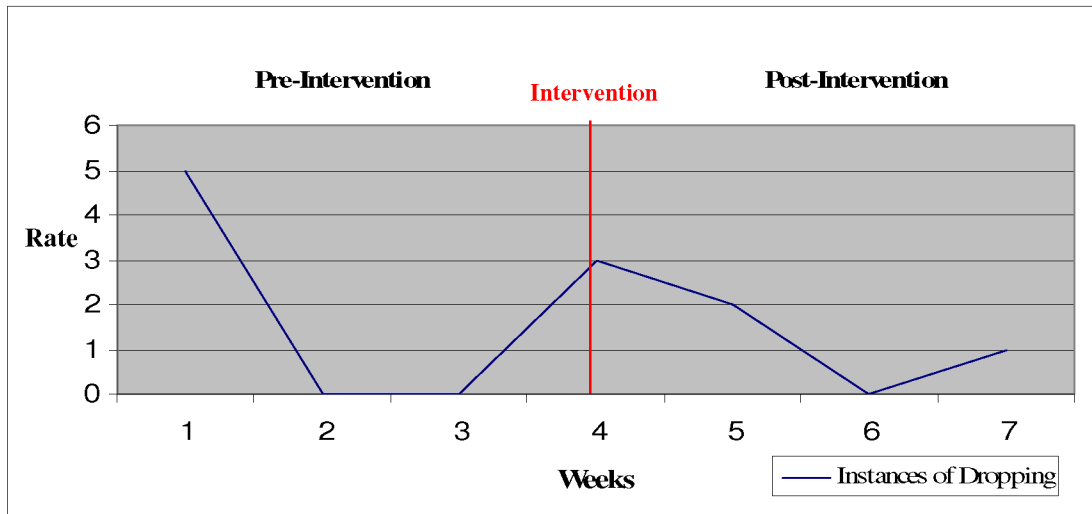


Figure 2. Rate of Christopher's dropping to the floor behaviour for all seven weeks of observation.

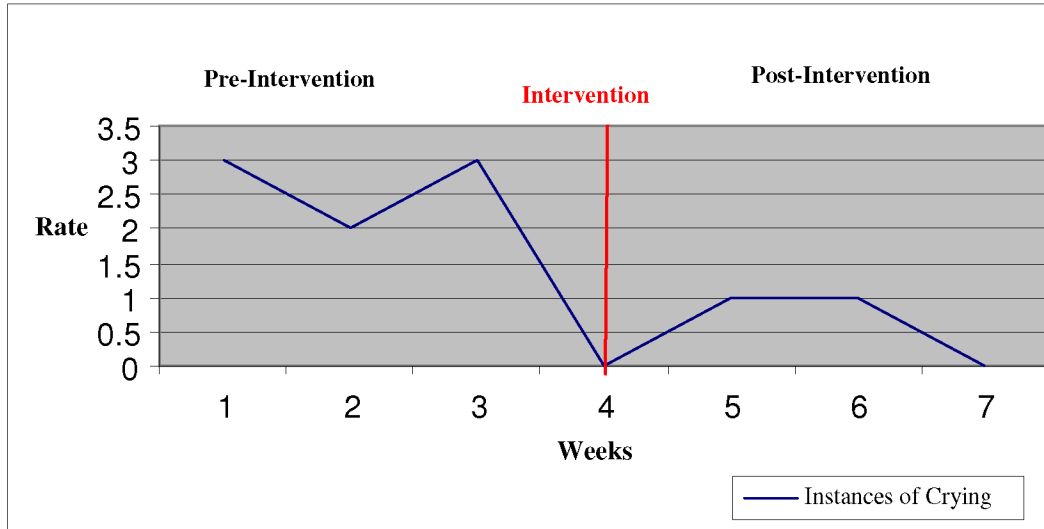


Figure 3. Rate of Christopher's agitation and crying behaviour for all seven weeks of observation.

*Pre-Intervention Observations (three weeks)**Target Behaviour 1: Dropping to the Floor*

Five instances of “dropping to the floor” were noted on the first day of observations. One of these occurred when Christopher first arrived in the morning, two while transitioning to speech and language therapy, and two when commencing afternoon circle time. Anecdotal reports indicated that Christopher had a nose bleed off and on through out the day. The function of the target behaviour was reported to be escape from activity. The predictors (as indicated on FAO form) were reported to be transitions, illness, and demand/request. These behaviours were not observed for the remainder of the week. No instances of “dropping to the floor” were reported during the second or third week of observations.

Target Behaviour 2: Agitation, Crying

Three instances of arriving to school crying and upset were observed the first week. Anecdotal reports revealed that Christopher was agitated (crying) upon arriving at school, but would settle down after 10-15 minutes and did not appear upset for the remainder of the day. Christopher was also reported to arrive at school with nose bleeds and would sometimes rub his stomach when crying. When Christopher first arrived at school he was immediately taken to the bathroom, as he was being toilet trained, and then given a small snack. It was reported that Christopher did not eat breakfast before coming to school.

The second and third week revealed similar results. Two instances of arriving to school crying were noted the second week, and three the third week of observations. Anecdotal reports indicated that Christopher often arrived at school very upset and

crying, which typically only lasted for 10-15 minutes. No nose bleeds were noted at this time. On five separate occasions, it was reported that Christopher arrived at school happy and did not have any concerns throughout the day.

Intervention: Behaviour Support Plan (see Appendix F)

The primary facilitator met with school personnel to design a Behaviour Support Plan, based on the assessment information collected. There appeared to be a number of factors contributing to Christopher's target behaviours. He was originally referred to participate in this study because his "dropping to the floor" behaviour was interfering with his education progress and classroom participation. As indicated in the interviews, the behaviour had been occurring 3-10 times per day for a period of four to five weeks. The primary target behaviour typically occurred upon arrival at school in the morning, when he was told to come in from afternoon recess, and/or when he was transitioning to a least preferred activity (i.e., regular education classroom, afternoon circle time). This behaviour was hypothesized to be maintained by receiving adult attention when asked and/or physically directed to stand up. It was also hypothesized that this behaviour was maintained because of the sensory stimulation of being physically prompted to stand up in addition to adult attention and the temporary avoidance/escape of a least preferred activity.

Once observations commenced, there was a rapid decrease in the rate of the target behaviour. However, Christopher continued to arrive at school agitated, upset, and crying that did not coincide with dropping to the floor. This behaviour was identified as the second target behaviour. The primary facilitator and school staff hypothesized that there were a number of setting events that may have been contributing to both target

behaviours at that time. These included the transition from a chaotic home environment to a structured school setting and illness. Christopher was reported to have had a number of nose bleeds, colds, and stomach problems in the past. As Christopher was nonverbal, he was unable to communicate these issues and may have been acting out because he was unwell.

As setting events are difficult to clearly identify and remediate, and it was clear that Christopher was agitated at certain times throughout the day, a relaxation approach was developed to remediate the secondary target behaviour in order to help relieve any stress from difficult transitions and calm him if feeling ill. The Behaviour Support Plan was not directly designed to remediate the primary target behaviour as school staff indicated that this behaviour was not their main concern since it decreased to a satisfactory level. However, it was hypothesized that the BSP may indirectly affect the primary target behaviour by relieving any stress that may have been contributing to the occurrence of “dropping to the floor”.

The primary facilitator and school staff delineated two time periods in Christopher’s daily schedule that would be used to teach Christopher self-relaxation techniques, in the form of a small book, to help with difficult transition periods (see Table 2 for revised daily schedule). When Christopher first arrived to school in the morning he was taken to the bathroom and then to the sensory room to go through his relaxation book. Christopher was also taken to a rocking bench in a quiet area beside the sensory room to go through his booklet after afternoon recess. The relaxation book was modified from Yack, Aguilla, and Sutton’s (2003) “My Relaxation Book” to meet Christopher’s individual needs and ability level. The book included four pages of self-

relaxation strategies with words and visual prompts from Mayer-Johnson Picture Communication Symbols. Christopher's EPA modeled the instructions on each page. The booklet instructed Christopher to hold a soft ball and squeeze tightly, squeeze hands, squeeze arms, squeeze shoulders, and finally to give himself a hug for five seconds.

Table 2

Christopher's Daily Schedule after BSP

Time	Activity
8:15	Arrival- bathroom, snack
8:20	Sensory room- relaxation activities
8:30	Circle time
8:45	Calendar HWT
8:55	Speech/enhanced
9:10	Classroom
9:35	Snack
9:55	Recess
10:10	Gym/music
10:30	Bathroom
10:35	Seat work
10:50	S.I. room
11:05	Classroom visit
11:20	Bathroom
11:25	Listening centre
11:30	Lunch
11:45	Book time
11:55	Play
12:20	PM circle time
12:30	Movement time
12:40	Centres
12:50	Recess
1:15	Bathroom classroom visit
1:20	Rocking Bench- relaxation activities
1:25-	Individual Baskets
1:35	Classroom
1:55	Prepare for home
2:00	Dismissal

*Post-Intervention Observations (four weeks)**Target Behaviour 1: Dropping to the Floor*

After the Behaviour Support Plan was implemented, Christopher was observed for an additional four weeks. Three instances of the primary target behaviour were observed in the first week post-intervention. All three occurred on separate days while transitioning to afternoon circle time. Christopher “dropped to the floor” twice on one day of the second week while transitioning to speech and language therapy and afternoon circle time. No instances of “dropping to the floor” were observed the third week, and only one instance of the primary target behaviour was noted in the final week during speech and language therapy. An escape function was reported on the FAO form, predicted by less preferred activity, for all instances of the primary target behaviour for all post-intervention observations.

Target Behaviour 2: Agitation, Crying

No instances of the secondary target behaviour were observed on the first week of observations, post-intervention. One instance of arriving to school crying was observed the second week. Anecdotal reports indicated that Christopher had a cold and missed two days of school. Week three of post-intervention observations indicated that Christopher arrived at school agitated and crying on one occasion, but calmed down after going through his relaxation booklet in the sensory room. No instances of the secondary target behaviour were observed the final week of observations. The reported function of the secondary target behaviour was escape predicted by illness for all secondary target behaviours observed.

Anecdotal reports revealed that the relaxation booklet helped to calm Christopher down in the morning and was a useful tool to help him with difficult transition periods. Christopher's EPA reported that he enjoyed going to a quiet space to go through his book. By the end of the observation period Christopher was beginning to do the relaxation activities himself without physical prompting.

Summary

After the Behaviour Support Plan was implemented, post-intervention observations were collected for 11 days. The relaxation booklet was modified after this period and observations continued to be collected until the end of the school year, 9 days after the booklet was revised. There was a reduction in the frequency in Christopher's secondary target behaviour (i.e., crying and agitation) from two to three times per week pre-intervention to 1 time per week during intervention. In addition, Christopher's primary target behaviour (i.e., dropping to the floor) was reduced from five instances the first week of observations to one to two instances per week in the last three weeks of post-intervention observations, although it was not specifically targeted with an intervention.

CHAPTER FOUR

Discussion

With the inclusion of children with autism into general education classrooms, important responsibilities have been placed on schools, teachers, parents and related professionals to determine the best educational interventions and practices that will allow each student with autism to succeed. Children with autism are at particular risk for developing challenging and disruptive behaviours that interfere with their educational progress and adaptive behaviour instruction due to their difficulties with social interactions and communication abilities (Fox et al., 2000). Such challenging behaviours can range from self-injurious behaviours and aggressive tantrums to serious self-stimulatory behaviours (Koegel et al., 1994).

One of the key issues that school staff have been presented with is determining what type of assessment data needs to be collected in order to develop an appropriate intervention when a student with autism is engaging in disruptive behaviours (Batsche & Knoff, 1995). Although researchers have not identified one approach that is better than another, efforts are aimed at identifying best practices for educating students with autism by placing equal emphasis on meeting students' social and emotional needs (Bryson et al., 2003; Howlin, 1998). The growth and development of Functional Behaviour Assessment has had a considerable impact on the way professionals assess and design interventions to remediate challenging behaviours displayed by individuals with developmental disabilities (Iwata et al., 1994). The primary goal of a Functional Behaviour Assessment is to match the function of a target/problem behaviour with an appropriate intervention plan. Although growth of Functional Behaviour Assessments

have been useful in determining the functions of individual's problem behaviour in controlled and clinical settings, which have led to the design of effective interventions, there are concerns regarding how this assessment process can be used in the public education system. These concerns include the amount of time needed to perform a complex assessment and lack of training by those responsible for conducting the assessment (Asmus et al., 2000; Sasso et al., 1994).

The primary purpose of this study was to evaluate whether training school staff in Functional Behaviour Assessment would lead to the development of a Behaviour Support Plan, which would decrease a student with autism's problem behaviour. A secondary purpose was to demonstrate how Functional Behaviour Assessments could be used in the school setting by training school teachers and education program assistants to implement FBA procedures and the treatments that result from the analysis.

Quantitative and Qualitative Data

Questionnaires

The results of the pre/post assessment training questionnaires revealed that school staff rated themselves as having an increased understanding and knowledge base of function-based support after training in Functional Behaviour Assessment. Participants also rated themselves as having an increased confidence level in their ability to develop and implement FBA procedures (e.g., interviews, observations, Behaviour Support Plan development) after FBA training. Results from the Workshop Evaluation Survey revealed that school staff felt the FBA training workshop was easy to understand, useful and well-organized. Participants also indicated that using function-based behaviour

support would improve the quality of the Behaviour Support Plans that they would develop for their students.

Functional Behaviour Assessment

The results from the functional assessment interviews conducted with school staff revealed several patterns. For Christopher's primary target behaviour, the interviews suggested that he was "dropping to the floor" during transitions to least preferred activities (e.g., regular education classroom, circle time). This behaviour was reported to have been occurring for a period of four to five weeks. Prior remediation of the target behaviour included ignoring the behaviour, and/or picking Christopher up from the floor and then leading him to the activity. School personnel suggested that Christopher's target behaviour was serving an escape function predicted by the demand/ request to perform a challenging or least preferred task. School personnel also hypothesized that Christopher's behaviour may have been maintained because of the sensory stimulation that he was receiving by being physically picked up from the floor. His EPA indicated that Christopher liked the sensation of deep pressure, such as being hugged and squeezed. Christopher's parents reported that they did not see these patterns of behaviour at home. This could be accounted for by the allowance of Christopher to perform preferred activities at home without demands or requests to perform challenging or difficult tasks.

Results from observations were less conclusive. The rate of Christopher's primary target behaviour (i.e., dropping to the floor) had decreased rapidly before observations had begun. However, during observations, it was noted that Christopher often arrived to school agitated and crying. This became Christopher's secondary target behaviour as it did not coincide with "dropping to the floor".

After pre-intervention observations and interviews had been completed, the school staff and primary facilitator met on two occasions to discuss the results of the interviews, observations, and to develop remediation strategies that would be built into the Behaviour Support Plan. Observational and anecdotal data indicated that there may have been a number of setting event variables that could have been contributing to Christopher's agitation in the morning and the dropping to the floor behaviour that the school staff had previously seen. Christopher was reported to have a number of colds that resulted in absence from school before and during observations. Information from interviews, observations, and anecdotal reports also indicated that Christopher experienced difficulty when transitioning to least preferred activities. Therefore, it was hypothesized that Christopher's behaviours could have been predicted by two events: illness and transitions.

The perceived function of his primary target behaviour (i.e., dropping to the floor) was to escape or avoid a least preferred activity (e.g., attend regular education classroom and participate in circle time). The perceived functions of Christopher's secondary target behaviour (i.e., crying and agitation) were to escape or avoid the demands of his schedule and obtain a desired activity. When Christopher arrived at school upset, his EPA would take him to the sensory room to calm down. During this time, Christopher listened to music and played in a large tent, which were activities that he enjoyed. It was hypothesized that Christopher was engaging in "crying" behaviours in the morning so he could go into the sensory room and play.

A Behaviour Support Plan was developed based on the assessment information collected and hypotheses regarding the functions of Christopher's behaviour. A

relaxation booklet was used to teach Christopher self-relaxation techniques twice a day. The rationale behind relaxation techniques was to assist Christopher's transition from home to school in the morning, relieve any stress that Christopher may be experiencing as a result of illness, and to aid the transition from afternoon recess to the demands of his afternoon schedule.

After the Behaviour Support Plan was implemented, post-intervention observations were collected for 11 days. The relaxation booklet was modified after this period to meet Christopher's individual needs and ability level. Observations continued to be collected until the end of the school year, 9 days after the booklet was revised. There was a reduction in the frequency in Christopher's secondary target behaviour (i.e., crying and agitation) from two to three times per week pre-intervention to 1 time per week during intervention. Christopher's primary target behaviour (i.e., dropping to the floor) was reduced from five instances the first week of observations to one to two instances per week in the last three weeks of post-intervention observations. However, this decrease in both primary and secondary target behaviours may have been due to other variables other than the specific intervention strategies employed. For example, anecdotal reports indicated that Christopher did not have any cold in the last week of observations. In addition, Christopher's EPA reported that Christopher appeared to be healthy for the first time in weeks. As well, the BSP was not directly tailored to decrease the primary target behaviour.

Christopher's EPA reported that his behaviour was more manageable when he was given opportunities for relaxation throughout his day. She also indicated that Christopher enjoyed going through his booklet and that it helped to calm him when he was

upset. Going to a special calm place within the school also appeared to have an effect on Christopher's behaviour, in addition to his relaxation booklet. As previously noted Christopher enjoyed deep pressure massages and playing in the sensory room. By structuring opportunities for Christopher to engage in these activities throughout the day, it taught him a practical way to alleviate and cope with stress in difficult situations.

Incorporating his relaxation program into two time frames in his daily schedule allowed time to teach his relaxation routine. For example, Christopher went through his relaxation booklet in the morning when he was usually upset, which may have helped him to recognize his feelings of heightened stress. He also went through his relaxation booklet in the afternoon, when he was least likely to be crying and agitated. It was important to teach Christopher relaxation strategies when he was calm in order for Christopher to learn techniques presented and ensure that the program was effective.

Benefit of FBA Training

School staff learned the fundamentals of function-based behaviour support, how to conduct a Functional Behaviour Assessment, and how to devise a Behaviour Support Plan that directly linked assessment to intervention. This study offered school staff the opportunity to conduct the FBA process on a student, while receiving direction, monitoring and feedback from the primary facilitator. As the numbers of challenging behaviours that school staff are presented with are on the rise, FBA offered a systematic and thorough method to address these issues.

This study also demonstrated the importance of taking a team approach to assessment and intervention. Three school personnel, Christopher's parents, and the primary facilitator and co-facilitator collaborated and consulted with each other to gather

indirect assessment information, conduct observations and develop a Behaviour Support Plan. It was beneficial to work as a team to ensure agreement regarding the functions of Christopher's behaviour. This was important in order to develop a Behaviour Support Plan that directly linked assessment to intervention. Although this overall approach was time consuming, the direct benefits of a thorough assessment process far outweighed the amount of time spent developing flawed treatment plans (Asmus et al., 2002). In addition, the process provided those conducting the assessment with information regarding the function of why the behaviour was occurring. Training teachers and education assistants would enable them to employ the methodology in their classrooms in the absence of the psychologist (Watson et al., 1999). This could reduce the cost and time for the School Psychologist and bring the student's behaviour under control before additional support and assistance was required.

This study added to the growing body of literature that pointed to the benefits of selecting school and classroom-based interventions based upon the function of behaviour (Broussard & Northup, 1995). Perhaps, most importantly, this study presented a relatively simple methodology for training school staff in Functional Behaviour Assessment and developing a Behaviour Support Plan based on assessment information. Neither Behaviour Support Plan practices nor FBA procedures had been systematically studied in this manner with this Board of Education. Sharing assessment information that could lead to reliable improvements in prosocial and negative behaviours in children with autism, as well as promoting possible future practices resulting from FBA training, was informative for the school-based teams and school board.

Limitations

Although both Christopher and the school staff benefited from participation in this study there were some limitations that must be considered before drawing definitive conclusions. First, due to the small number of participants within this study, there were limitations on the statistics that could be employed. This, in turn, impacted the conclusions that could be drawn from this study.

As Christopher's primary target behaviour (i.e., dropping to the floor) decreased before observations could be conducted and a Behaviour Support Plan developed, it was difficult to obtain any statistically reliable information. In addition, it was difficult to design a Behaviour Support Plan that was directly linked to the assessment information collected because of the decrease in the primary target behaviour. Although a secondary target behaviour was identified (i.e., crying and agitation), the occurrence of this behaviour was hypothesized to be predicted by a number of setting events that the school staff did not have any control over (e.g., illness, transition from home to school). As the primary purpose of this study was to evaluate whether training school staff in FBA would lead to better designed Behavior Support Plans, a major limitation of this study was the inability to effectively design a Behaviour Support Plan that tailored an intervention directly to the functions of the target behaviours.

Second, follow-up data was not collected because the end of the school year resulted in termination of the intervention. Therefore, specific conclusions regarding the cause of the reductions of the target behaviours (i.e., relaxation intervention) were unable to be drawn due to the possibility of other variables accounting for Christopher's improved behaviour. Given the persistent history of Christopher's colds and stomach

problems, it was likely that the behaviour would have changed significantly without the intervention.

Third, as setting events, such as illness and transitioning from his home environment, may have triggered Christopher's target behaviours, it was difficult to determine appropriate school-based interventions. Although Christopher's parents reported that they did not see these patterns of behaviour at home, it became clear that an intervention developed at home would have assisted Christopher at school. This may have included eating breakfast at home, being taken to the doctor if he was ill, and setting up a structured home environment. Howlin (1998) indicated that, at times, ritualistic and challenging behaviours may play a part in reducing anxiety, thus engaging in those behaviours may have a calming effect. Strategies to help reduce problem behaviours based on anxiety have been reported in the literature (Howlin & Rutter, 1987; Schopler, Mesibov & Hearsey, 1995). For example, establishing predictable routines, providing visual cues to display what is going to happen, and teaching alternative coping behaviours such as relaxation are helpful techniques to aid with anxiety when facing transitions (Howlin et al., 1987). At school, Christopher's daily schedule was structured with routine and visual aids, and he used a picture exchange communication system to communicate. However, these strategies were not used in the home.

Future Direction

This study was an initial step for training school staff in Functional Behaviour Assessment as only three school personnel and one student with autism participated. It was important for the purpose of this study that one student was the focus, in order to provide as much support and direction to the staff, school and student. A next step would

be to expand training to target a larger number of school members and children. This may involve examining the most effective ways to train school personnel at a system or organization level, such as targeting training to encompass a school-wide and school board effort. Dunlap and colleagues (2000) noted that team training in FBA must address broader system issues, which impacts the ongoing support of staff and students. The degree to which an organization, in this case, school system, promotes proactive behaviour support is a critical feature in the effectiveness and longevity of the program. By including more students with autism, more reliable information could be obtained. This would benefit the future direction of how FBAs are conducted within the school system and what, if any, measures need to be taken when assessing the behaviour of students with autism.

In this study, it was a relatively straightforward process for Christopher's Educational Program Assistant (EPA) to gather observational information, as the target behaviours were infrequent and easy to document. However, if a student engaged in problem behaviours that were occurring at multiple times throughout the day, additional staff member(s) would be required to record observational information. Additional staff may be difficult to attain if the school board did not promote this type of programming. As well, training a larger number of school personnel and related professionals would allow members to support each other in the assessment process. It may be beneficial for school staff to delineate a FBA team that would work together to complete the FBA process with as much support and assistance as possible. Defining FBA as a collaborative process is the first step in building a school-wide commitment (Jolivet, Barton-Arwood, & Scott, 2000).

Another area for future research would be to determine the long-term effects on teachers who have been taught functional assessment skills (Watson et al., 1999). Assessing whether their skills were maintained and generalized to other situations, students, and problems and whether these skills led to the development of Behaviour Support Plans that directly linked assessment to function(s) of the target behaviour(s) would be beneficial for future training situations. Ongoing evaluation of skill development and training may be warranted.

Initially the role of the primary facilitator was to be that of a facilitator; however, in practice it turned into more of a leadership role. For example, the primary facilitator conducted interviews with all school staff and Christopher's parental guardians. Although the two classroom teachers were present when Christopher's parents were interviewed, their role at this time was to observe the interview process and record responses on the FAI form. The primary facilitator also collected observational information for two days; however, Christopher's EPA continued to collect observational information using the FAO form until the end of the school year. After assessment information was obtained, the primary facilitator met with the school staff to discuss interventions that would be built into the Behaviour Support Plan. While this was a collaborative process, the primary facilitator wrote the plan and then helped Christopher's EPA with implementation. Christopher's EPA implemented the plan daily with weekly visits and support from the primary facilitator. The end of the school year then resulted in the end of the BSP and school staff support. Therefore, another area of future research regarding training would be for FBA facilitators to identify the process of scaffolding the

leadership and support role of the facilitator to a state of independence and ownership by the school staff.

It may be beneficial for FBA facilitators to know what the full training process includes. For example, training in FBA does not end after the FBA training workshop has been completed. There are still a number of processes that need to take place before school staff are ready to complete the FBA procedures with students on their own, without receiving support and direction from experienced facilitators. This process may include on-the-job training, where the facilitator takes a leadership role by demonstrating how to conduct interviews and observations. A next step to on-the-job-training could include having the facilitator observe and monitor school staff while they conduct interviews and observations. Then the facilitator would offer support and feedback. Once the facilitator has trained school staff in FBA, demonstrated how to complete this process with a student, and monitored school staff completing the FBA process with a student, then the facilitator can determine whether school staff are ready to complete this process independently or if they need further direction and support.

Future research should also be dedicated to identifying and incorporating the best practices in functional assessment technology (Cunningham et al., 2000). This study focused on using assessment tools outlined by O'Neill and colleagues (1997). However, there are other indirect assessment methods in the literature that may be beneficial tools for assessing the function(s) of student's challenging behaviours (Cunningham et al., 2000). For example, the Motivation Assessment Scale (MAS) developed by Durand and Crimmins (1992) is an additional method to determine the function of individual's

problem behaviours by assessing the influence of social attention, tangibles, escape, and sensory consequences on problem behaviour.

Conclusion

In summary, the purpose of this study was to train a small group of school personnel in Functional Behaviour Assessment and demonstrate how this process could be used in a school setting with a student with autism. Although the results of this case study were not statistically significant, the benefits of training personnel in school settings are promising. As children with autism continue to attend regular education classroom and schools, it is essential that school staffs are provided with quality education services, training and support that will allow them to meet the individual needs of those students. This study offered an empirically validated assessment tool that would assist school staff in determining the function(s) of student's challenging behaviours. It also delivered a clear method to design a Behaviour Support Plan that linked assessment to intervention. By providing school staff with this information, the likelihood of meeting emotional and social needs of individuals with autism can be increased.

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Appendix A

Pre-Training Assessment Questionnaire

Pre-Training Assessment Questionnaire
Self-Evaluation of Ability in Function-Based Support

Name: _____

1. I understand how Function-Based Behaviour Support fits into a continuum of behaviour support in schools.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

2. I have assessed whether my school is ready to implement Function-Based Behaviour Support.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

3. I understand the environmental sequence events:

Setting event → antecedent → behaviour → consequence
and how the sequence is used to determine the function problem behaviour for the student.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

4. I feel confident that I can conduct classroom observations and document Antecedent Behaviour and Consequence information.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

5. I feel confident that I can conduct function-based interviews with teachers, parents, and students.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

6. I know how to use information from interviews and observations to complete a competing behaviour pathway.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

7. I feel confident that I can use the competing behaviour pathway information to develop an individualized, function-based Behaviour Support Plan that addresses antecedent, teaching behaviour, and consequence factors.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

8. I am able to develop a system to monitor the effectiveness of the Behaviour Support Plan.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

9. I know how to identify students for whom implementing a full, intensive Functional Behavioural Assessment and implementing a Behaviour Support Plan is most appropriate.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

Appendix B

Post-Training Assessment Questionnaire

Post-Training Assessment Questionnaire
Self-Evaluation of Ability in Function-Based Support

Name: _____

1. I understand how Function-Based Support fits into a continuum of behaviour support in schools.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

2. I have assessed whether my school is ready to implement Function-Based Support.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

3. I understand the environmental sequence events:

setting event → antecedent → behaviour → consequence

and how the sequence is used to determine the function problem behaviour for the student.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

4. I feel confident that I can conduct classroom observations and document ABC information.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

5. I feel confident that I can conduct function-based interviews with teachers, parents, and students.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

6. I know how to use information from interviews and observations to complete a competing behaviour pathway.

5	1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

7. I feel confident that I can use the competing behaviour pathway information to develop an individualized behaviour support plan that addresses antecedent, teaching behaviour, and consequence factors.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

8. I am able to develop a system to monitor the effectiveness of the behaviour support plan.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

9. I know with which students and under which circumstances implementing Function-Based Support is most appropriate.

1	2	3	4	5
Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know

Appendix C

Workshop Evaluation Survey

Workshop Evaluation Survey

1. The material presented in the workshop was useful.

Strongly Agree				Strongly Disagree
1	2	3	4	5

2. I expect that the suggestions made throughout the course of this training day will be manageable to implement in my job.

Strongly Agree				Strongly Disagree
1	2	3	4	5

3. Today's workshop was well-organized.

Strongly Agree				Strongly Disagree
1	2	3	4	5

4. The material presented in today's workshop was easy to understand.

Strongly Agree				Strongly Disagree
1	2	3	4	5

5. I felt that my opinions and input were requested and respected in today's workshop.

Strongly Agree				Strongly Disagree
1	2	3	4	5

6. I feel that my skills in function-based behaviour support will improve as a result of my participation in this workshop

Expect Large Improvement				No Improvement
1	2	3	4	5

7. I feel that using function-based behaviour support will improve the quality of the behaviour support plans we develop for our individual students.

Strongly Agree				Strongly Disagree
1	2	3	4	5

8. In what ways was the workshop helpful?

9. What suggestions do you have to improve today's workshop for future presentations?

Appendix D

Functional Assessment Observation Form

Appendix E

Functional Assessment Interview

FUNCTIONAL ASSESSMENT INTERVIEW (FAI)

Person of concern _____ Age _____ Sex M F
Date of interview _____ Interviewer _____
Respondents _____

A. DESCRIBE THE BEHAVIORS.

- 1. For each of the behaviors of concern, define the topography (how it is performed), frequency (how often it occurs per day, week, or month), duration (how long it lasts when it occurs), and intensity (how damaging or destructive the behaviors are when they occur).

<i>Behavior</i>	<i>Topography</i>	<i>Frequency</i>	<i>Duration</i>	<i>Intensity</i>
a.	_____	_____	_____	_____
b.	_____	_____	_____	_____
c.	_____	_____	_____	_____
d.	_____	_____	_____	_____
e.	_____	_____	_____	_____
f.	_____	_____	_____	_____
g.	_____	_____	_____	_____
h.	_____	_____	_____	_____
i.	_____	_____	_____	_____
j.	_____	_____	_____	_____

- 2. Which of the behaviors described above are likely to occur together in some way? Do they occur about the same time? In some kind of predictable sequence or "chain"? In response to the same type of situation?

DEFINE ECOLOGICAL EVENTS (SETTING EVENTS) THAT PREDICT OR SET UP THE PROBLEM BEHAVIORS.

1. What *medications* is the person taking (if any), and how do you believe these may affect his or her behavior?

2. What *medical or physical conditions (if any)* does the person experience that may affect his or her behavior (e.g., asthma, allergies, rashes, sinus infections, seizures, problems related to menstruation)?

3. Describe the *sleep patterns* of the individual and the extent to which these patterns may affect his or her behavior.

4. Describe the *eating routines and diet* of the person and the extent to which these may affect his or her behavior.

- 5a. Briefly list below the person's typical daily schedule of activities. (Check the boxes by those activities the person enjoys and those activities most associated with problems.)

<i>Enjoys</i>		<i>Problems</i>				<i>Enjoys</i>		<i>Problems</i>	
<input type="checkbox"/>	<input type="checkbox"/>	6:00	_____	<input type="checkbox"/>	<input type="checkbox"/>	2:00	_____		
<input type="checkbox"/>	<input type="checkbox"/>	7:00	_____	<input type="checkbox"/>	<input type="checkbox"/>	3:00	_____		
<input type="checkbox"/>	<input type="checkbox"/>	8:00	_____	<input type="checkbox"/>	<input type="checkbox"/>	4:00	_____		
<input type="checkbox"/>	<input type="checkbox"/>	9:00	_____	<input type="checkbox"/>	<input type="checkbox"/>	5:00	_____		
<input type="checkbox"/>	<input type="checkbox"/>	10:00	_____	<input type="checkbox"/>	<input type="checkbox"/>	6:00	_____		
<input type="checkbox"/>	<input type="checkbox"/>	11:00	_____	<input type="checkbox"/>	<input type="checkbox"/>	7:00	_____		
<input type="checkbox"/>	<input type="checkbox"/>	12:00	_____	<input type="checkbox"/>	<input type="checkbox"/>	8:00	_____		
<input type="checkbox"/>	<input type="checkbox"/>	1:00	_____	<input type="checkbox"/>	<input type="checkbox"/>	9:00	_____		

5b. To what extent are the activities on the daily schedule *predictable* for the person, with regard to what will be happening, when it will occur, with whom, and for how long?

5c. To what extent does the person have the opportunity during the day to *make choices* about his or her activities and reinforcing events? (e.g., food, clothing, social companions, leisure activities)

6. How many other persons are typically around the individual at home, school, or work (including staff, classmates, and housemates)? Does the person typically seem *bothered* in situations that are more *crowded and noisy*?

7. What is the pattern of *staffing support* that the person receives in home, school, work, and other settings (e.g., 1:1, 2:1)? Do you believe that the *number of staff*, the *training of staff*, or their *social interactions with the person* affect the problem behaviors?

C. DEFINE SPECIFIC IMMEDIATE ANTECEDENT EVENTS THAT PREDICT WHEN THE BEHAVIORS ARE *LIKELY* AND *NOT LIKELY* TO OCCUR.

1. *Times of Day*: When are the behaviors most and least likely to happen?

Most likely: _____

Least likely: _____

2. *Settings: Where are the behaviors most and least likely to happen?*

Most likely: _____

Least likely: _____

3. *People: With whom are the behaviors most and least likely to happen?*

Most likely: _____

Least likely: _____

4. *Activity: What activities are most and least likely to produce the behaviors?*

Most likely: _____

Least likely: _____

5. Are there particular or idiosyncratic situations or events not listed above that sometimes seem to “set off” the behaviors, such as particular demands, noises, lights, clothing?

6. What *one thing* could you do that would most likely make the undesirable behaviors occur?

7. Briefly describe how the person’s behavior would be affected if . . .

a. You asked him or her to perform a difficult task.

b. You interrupted a desired activity, such as eating ice cream or watching TV.

c. You unexpectedly changed his or her typical routine or schedule of activities.

d. She or he wanted something but wasn't able to get it (e.g., a food item up on a shelf).

e. You didn't pay attention to the person or left her or him alone for a while (e.g., 15 minutes).

D. IDENTIFY THE CONSEQUENCES OR OUTCOMES OF THE PROBLEM BEHAVIORS THAT MAY BE MAINTAINING THEM (I.E., THE FUNCTIONS THEY SERVE FOR THE PERSON IN PARTICULAR SITUATIONS).

1. Think of each of the behaviors listed in Section A, and try to identify the *specific* consequences or outcomes the person gets when the behaviors occur in different situations.

<i>Behavior</i>	<i>Particular situations</i>	<i>What exactly does he or she get?</i>	<i>What exactly does she or he avoid?</i>
a.	_____	_____	_____
b.	_____	_____	_____
c.	_____	_____	_____
d.	_____	_____	_____
e.	_____	_____	_____
f.	_____	_____	_____
g.	_____	_____	_____
h.	_____	_____	_____
i.	_____	_____	_____
j.	_____	_____	_____

E. CONSIDER THE OVERALL *EFFICIENCY* OF THE PROBLEM BEHAVIORS. EFFICIENCY IS THE COMBINED RESULT OF (A) HOW MUCH *PHYSICAL EFFORT* IS REQUIRED, (B) *HOW OFTEN* THE BEHAVIOR IS PERFORMED BEFORE IT IS REWARDED, AND (C) *HOW LONG* THE PERSON MUST WAIT TO GET THE REWARD.

	Low Efficiency				High Efficiency
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5

WHAT FUNCTIONAL ALTERNATIVE BEHAVIORS DOES THE PERSON ALREADY KNOW HOW TO DO?

1. What socially appropriate behaviors or skills can the person already perform that may generate the same outcomes or reinforcers produced by the problem behaviors?

WHAT ARE THE PRIMARY WAYS THE PERSON COMMUNICATES WITH OTHER PEOPLE?

1. What are the general expressive communication strategies used by or available to the person? These might include vocal speech, signs/gestures, communication boards/books, or electronic devices. How consistently are the strategies used?

2. On the following chart, indicate the behaviors the person uses to achieve the communicative outcomes listed:

<i>Communicative Functions</i>	Complex speech (sentences)	Multiple-word phrases	One-word utterances	Echolalia	Other vocalizing	Complex signing	Single signs	Pointing	Leading	Shakes head	Grabs/reaches	Gives objects	Increased movement	Moves close to you	Moves away or leaves	Fixed gaze	Facial expression	Aggression	Self-injury	Other
Request attention																				
Request help																				
Request preferred food/objects/activities																				
Request break																				
Show you something or some place																				
Indicate physical pain (headache, illness)																				
Indicate confusion or unhappiness																				
Protest or reject a situation or activity																				

3. With regard to the person's **receptive communication**, or ability to understand other persons . . .
 - a. Does the person follow **spoken requests or instructions**? If so, approximately how many? (List if only a few.)

 - b. Does the person respond to **signed or gestural requests or instructions**? If so, approximately how many? (List if only a few.)

 - c. Is the person able to imitate if **you provide physical models for various tasks or activities**? (List if only a few.)

 - d. How does the person typically indicate *yes or no* when asked if she or he wants something, wants to go somewhere, and so on?

H. WHAT ARE THINGS YOU *SHOULD DO* AND THINGS YOU *SHOULD AVOID* IN WORKING WITH AND SUPPORTING THIS PERSON?

1. What things can you do to improve the likelihood that a teaching session or other activity will go well with this person?

2. What things should you avoid that might interfere with or disrupt a teaching session or activity with this person?

WHAT ARE THINGS THE PERSON LIKES AND ARE REINFORCING FOR HIM OR HER?

1. *Food items:* _____

2. *Toys and objects:* _____

3. *Activities at home:* _____

4. *Activities/outings in the community:* _____

5. *Other:* _____

J. WHAT DO YOU KNOW ABOUT THE HISTORY OF THE UNDESIRABLE BEHAVIORS, THE PROGRAMS THAT HAVE BEEN ATTEMPTED TO DECREASE OR ELIMINATE THEM, AND THE EFFECTS OF THOSE PROGRAMS?

<i>Behavior</i>	<i>How long has this been a problem?</i>	<i>Programs</i>	<i>Effects</i>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
0.	_____	_____	_____

K. DEVELOP SUMMARY STATEMENTS FOR EACH MAJOR PREDICTOR AND/OR CONSEQUENCE.

<i>Distant Setting Event</i>	<i>Immediate Antecedent (Predictor)</i>	<i>Problem Behavior</i>	<i>Maintaining Consequence</i>

Appendix F

Behaviour Support Plan

Behaviour Support Plan

NAME:	Christopher Smith
DATE OF BIRTH:	May 11, 1998
AGE:	9 years
GRADE:	2
SCHOOL:	Elementary School
PSYCHOLOGIST:	Rebecca Carter, Masters in School Psychology Student
SUPERVISOR:	Lauren Clare, MA, Registered Psychologist.

Problem Behaviours

1. Dropping to the floor: Laying down on the floor and not standing up when directed.
2. Agitation: Crying upon arrival at school.

Functional Assessment Summary Statements

Christopher was originally referred for a functional behaviour assessment because his dropping to the floor was interfering with his education progress and classroom participation. As indicated in the functional assessment interviews, the behaviour of dropping to the floor had been occurring 3-10 times per day for a period of four to five weeks. In addition, the interviews revealed that Christopher's problem behaviour typically occurred upon arrival at school in the morning, when he was told to come in from afternoon recess, and/or when he was transitioning to a least preferred activity (i.e., regular education classroom, p.m. circle time). These behaviours were hypothesized to be maintained by receiving adult attention when asked and/or physically directed to stand up. It was also hypothesized that this behaviour was maintained because of the sensory stimulation of being physically prompted to stand up in addition to adult attention and the temporary avoidance of a least preferred activity.

Once naturalistic observations commenced, there was a rapid decrease in the rate of the problem behaviour. However, Christopher was still observed to arrive at school very agitated, upset and often crying. A secondary problem behaviour was identified at that time. It was hypothesized that a number of setting events could have been contributing to Christopher's agitation and a behaviour support plan was developed to help alleviate his stress. Such setting events included illness and transition from home to school. As indicated in the interviews and observations, Christopher was reported to have a number of nose bleeds and colds at school, and stomach problems in the past. As

Christopher is nonverbal, he is unable to communicate these issues and may have been acting out because he was feeling unwell.

General Approach

Setting Event Strategies: none

Predictor Strategies: It was reported that Christopher often did not eat breakfast before school. The school staff had been giving Christopher a small snack upon arrival in the morning, and would continue to do so.

Teaching Strategies: During two time periods in Christopher's daily schedule, he was taught self-relaxation techniques to help him calm down after arriving in the morning and with transition periods that he found difficult. When Christopher first arrived at school in the morning he would continue to be taken to the bathroom and then to the sensory room to go through his relaxation book. Christopher was also taken to a rocking bench in a quiet area beside the sensory room to go through his booklet after p.m. recess. The relaxation book was modified from Yack, Aguilla, and Sutton's (2003) "My Relaxation Book" to meet Christopher's individual needs and ability level. The book included four pages of self-relaxation strategies with words and visual prompts. Christopher's EPA helped him read and perform the instructions on each page. The booklet instructed Christopher to hold a soft ball and squeeze tightly, squeeze hands, squeeze arms, squeeze shoulders, and finally to give himself a hug for five seconds.

Consequence Strategies: When Christopher arrived at school upset and crying he would be taken into the sensory room or rocking bench to allow him time to calm down before starting his typical daily routine. When the Relaxation Booklet was introduced, he was taken to the sensory room or rocking bench area during two time periods to allow time to calm down and a second time, to allow proper self-relaxation teaching, even if Christopher was not upset.

Monitoring and Evaluation

The Functional Assessment Observation form and antidotal records kept by Christopher's EPA was used to monitor the frequency of Christopher's (a) dropping to the floor, and (b) agitation. The data was reviewed by the school psychology student, enhancement room teachers, and Christopher's EPA on a weekly basis. The Relaxation Booklet was revised and modified 11 days after initial implementation to meet Christopher's individual needs. Observations continued to be collected until the end of the school year, 9 days after the booklet was revised.

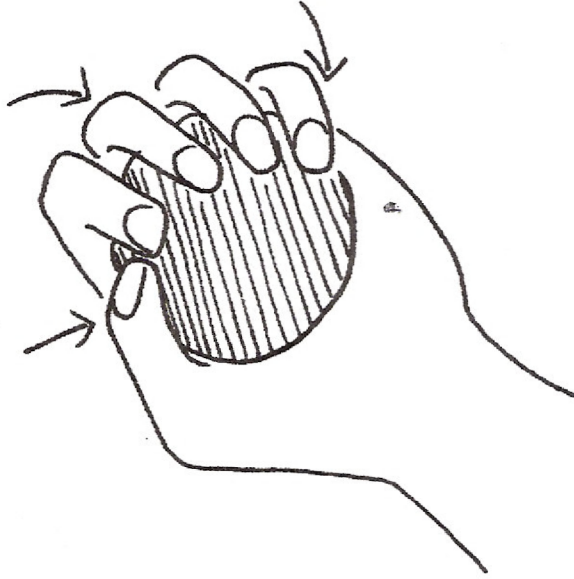
The school psychology student, enhancement room teachers, school principal, and Christopher's parental guardians met at the end of the school year to discuss the results of the behaviour support plan. At that time it was discussed that the frequency of Christopher's original target behaviour (dropping to the floor) had decreased significantly and that behaviour support plan was developed to aid with the agitation that Christopher

was exhibiting in the morning and as a preventative measure to future problem behaviours. Setting event factors, such as Christopher's illness and difficulty with the home-school transition period were also acknowledged as possible contributing factors to his dropping to the floor target behaviour.

Rebecca Carter, M.A., School Psychology Student

Lauren Clare, M.A., Psychologist

1. Hold the ball and squeeze tightly.



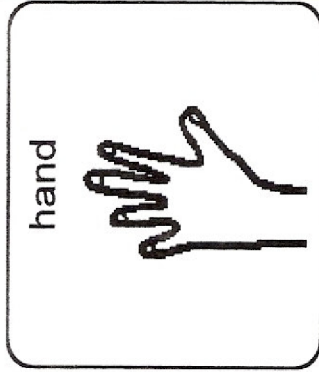
Now let go; relax.

My Relaxation Book

[Place child's picture here]

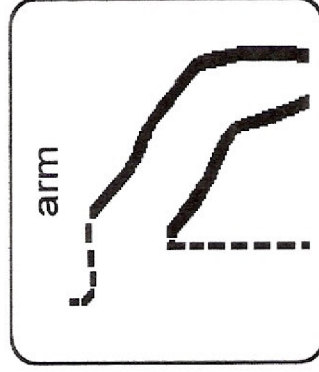
Name: _____

2. Squeeze Hands



- 1, 2, 3, 4, 5

3. Squeeze Arms



- 1, 2, 3, 4, 5

4. Squeeze Shoulders

Squeeze



shoulder



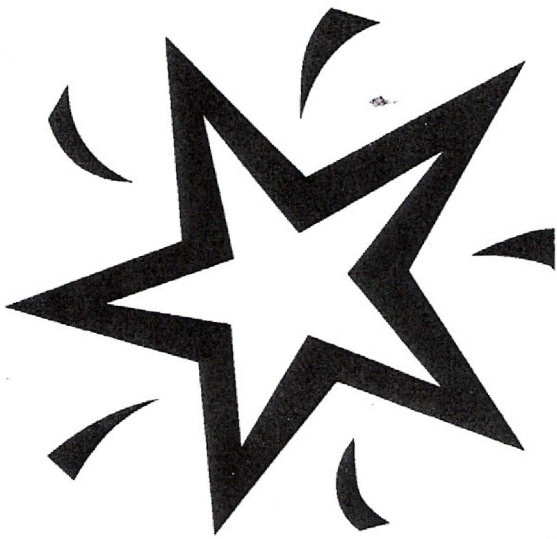
-1, 2, 3, 4, 5

5. Give Yourself a Hug

hug

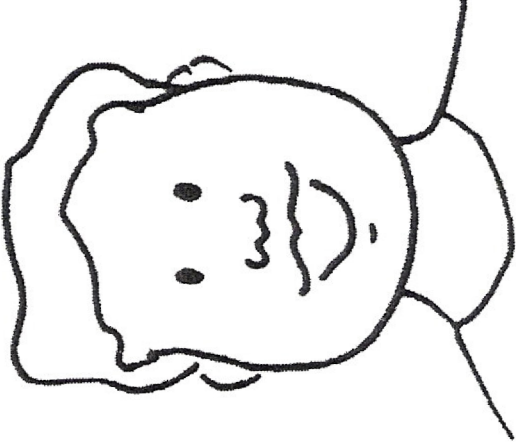


-1, 2, 3, 4, 5



I did a good job

**6. Now you are nice
and relaxed.**



Appendix G

Informed Consent Letters

PRINCIPAL CONSENT FORM: FUNCTIONAL BEHAVIOUR ASSESSMENT

Functional Behaviour Assessment for Children with Autism: Evaluation of a Training Program for Teachers and Education Program Assistants

Dear School Principal:

My name is Rebecca Carter. I am a graduate student in school psychology in the Department of Education at Mount Saint Vincent University. I am writing to inform you about some research that I am doing on functional behaviour assessments (FBA) with children with autism. I am doing this research with Lauren Clare, who is employed in the Tri County Regional School Board. I am asking your permission to conduct this research in your school. This study has been approved by the Mount Saint Vincent University Research Ethics Board and School Board.

Purpose of the Research

The main purpose of this study is to examine whether behaviour support plans that are devised and implemented after training in functional behaviour assessment will lead to more effective plans than behaviour support plans that are not based on functional behaviour assessment information.

What is a Functional Behaviour Assessment?

Functional behaviour assessment is a process of identifying the purpose or function of a student's behaviour in relation to its surrounding environment so that appropriate interventions can be designed to meet the individual needs of the student. There are five primary outcomes of the FBA process: (a) a clear description of the problem behaviour; (b) identification of the events, times, and situations that predict when the problem behaviours will and will not occur; (c) identification of the consequences that maintain the problem behaviour; (d) development of summary statements that describe specific behaviours, situations in which they occur, and the outcomes/reinforcers maintaining the behaviour in a situations; and (e) collection of direct observation data that support the summary statements.

Understanding that challenging behaviour serves a purpose or function is the first step in developing effective interventions. If the primary function of an inappropriate behaviour can be identified, then it is possible to provide the child with an alternative, more appropriate behaviour that serves the same function within the students' behaviour support plan.

Description of Research

Participants in the study include students with a primary diagnosis of autism and their Program Planning Team members (classroom teacher, EPA, resource teacher). Other criterion for the student includes absence of co-morbid disorders and concerns regarding challenging behaviours within the classroom. This study will require the researcher as

well as school staff to work with the student for a total of 20-30 hours over a period of eight weeks. During that time the researcher, teacher, and/or staff member will observe the student 2-3 days on three to four separate occasions during regular school hours.

If you have a child that fits this description, you will be asked to be the initial point of contact between the researcher and parents and will continue to be the school contact person for the parents, as necessary. This would entail contacting that student's parental guardians to see if they are interested in receiving more information regarding this study and their potential involvement. If the parental guardians agree to allow their child to participate, the school staff working with the child should be contacted to see if they are willing to participate in the study. If interested, a more detailed consent letter will be provided to them.

Typically, school staff would include teachers, educational program assistants, school psychologists, autism specialists/consultants and administration. Staff participants will be invited to receive an eight-hour training workshop in functional behaviour assessment offered either after school hours or on a Saturday. This workshop will be presented by the researcher and Lauren Clare. During the workshop, school staff will learn the fundamentals of positive behaviour support, the functional behaviour assessment process, how to devise a behaviour support plan, and how positive behaviour support and functional behaviour assessment fits into your current school system.

Once trained, staff will be asked to carry out the FBA process in your school on the student with autism. This will include conducting interviews with the child's guardians and observing the child's behaviour in order to develop hypotheses regarding the functions of the student's behaviour. Interviews typically take 90 minutes to complete and will be conducted at the school or over the phone with the child's guardians. Specifically, the interview will consist of questions regarding descriptions of the student's behaviour, environment and physical factors that might contribute to the occurrence of the behaviour, typical eating and sleeping routines, daily schedules, and what functions the challenging behaviours might be serving. A meeting will then be scheduled after school hours to review the assessment data and develop a behaviour support plan with the school staff under the direction of the researcher and co-facilitator. Behaviour support plans will then be implemented with the student in order to decrease problem behaviour and increase prosocial, positive behaviours. The researcher will assist the teacher and other school staff in implementing the plan and will be available for questions when necessary. A second meeting will be scheduled with the student's parental guardians and school staff to review the behaviour support plan and the student's progress.

All data collected in the interviews and observations will be stored in a locked cabinet under the care of the School Psychologist assigned to the school. The final behaviour support plan will be kept in the student's cumulative record folder to assist school staff with the student's programming. A copy of the result of this study will be provided to the school once the study has been completed.

Potential Benefits

In recent years, a number of research articles have demonstrated the effectiveness of FBA in schools in the reduction of challenging behaviours. In addition, FBAs have been found to be effective in identifying the function(s) of inappropriate behaviours and have led to more effective treatments plans for individuals with autism. Teachers, EPAs, school psychologists, autism specialists, and administration will benefit from being trained in FBA as the behaviour support plans that they develop will be better written and hence more productive in reducing challenging behaviours. Training in FBA will give participants a greater understanding of the function(s) surrounding inappropriate behaviours and how to develop effective interventions that are based on a thorough assessment process.

The direct benefit of this study for the students is found in the behaviour support plan that the child will receive as a result of his/her participation in the study. Results of the assessment can highlight the functions of the child's behaviour. Behaviour support plans are designed to alter patterns of problem behaviour by identifying the events that contribute to the likeliness that problem behaviours will occur and the consequences that may be maintaining your child's behaviours. Specific remediation strategies are built in to behaviour support plans in order to decrease problem behaviour and increase positive, prosocial behaviours.

Potential Harms, Discomforts, or Inconveniences

Potential discomforts within the study are a direct result of the behaviour support plans that are developed. The behaviour plans may include contingencies that may alter the student's behaviour. Often an increase in problem behaviour(s) is evident until the child has learned the consequences for his/her behaviour. School staff will be asked to conduct an interview with the student's parental guardians. Questions from that interview might reveal sensitive material in which both parties may feel uncomfortable.

Confidentiality and Withdrawal

All student and staff participation in this study is entirely voluntary and they can withdraw from the study at any time. Participants are told that if they choose not to participate or they choose to withdraw from the study their employment or enrollment in the Chignecto-Central Regional School Board will not be compromised.

Confidentiality will be respected and no information that discloses the student's, school staff, or school's identity will be published without consent unless required by law. The data we collect will be analyzed and stored with the School Psychologist assigned to your school in locked files. If the results of this study are published, the publication will not contain any information that would identify the school, staff, or student. All assessment information will be kept in locked files for 10 years and then destroyed. This information will be accessible only to the researcher, her co-facilitator and the School Psychologist. The behaviour support plans that are developed will be kept in the student's cumulative record folder in order to share the information with the student's future teachers.

Confidentiality is limited if a research member learns of suspected harm to a child or if the child is in danger of hurting him/herself or another student(s). In such instances, the primary facilitator and principal will be notified immediately.

Contact Person

Please feel free to contact Rebecca Carter by phone or by email or Lauren Clare by email to discuss any aspects of this study.

This research study has been approved by the School Board. Please contact, Assistant Director of Education Services, with any questions by phone at 555-555-5555.

If you have any questions or concerns about the conduct of this study and wish to speak with someone who is not directly involved in the study, you may contact the Chair of the University Research Ethics Board (UREB) by phone at 902-457-6350 or by e-mail at research@msvu.ca.

Sincerely,

Rebecca Carter

“I acknowledge that the research procedures described above have been explained to me and that any questions that I have asked have been answered to my satisfaction. I have been informed of the alternatives to participation in this study, including the right not to participate and the right to withdraw without comprising my employment. As well, the potential harms and discomforts have been explained to me and I also understand the benefits of school staff and students’ participating in the research study. I know that I may ask now, or in the future, any questions I have about the study or the research procedures. I have been assured that records relating to this study will be kept confidential and that no information will be released or printed that would disclose personal identity without my permission unless required by law. I agree to be the initial point of contact between the researcher and parents and will continue to be the school contact person for the parents, as necessary.”

I hereby consent to participate.

Name of School Principal

Signature

Date

SCHOOL PERSONNEL CONSENT FORM: FUNCTIONAL BEHAVIOUR ASSESSMENT

Functional Behaviour Assessment for Children with Autism: Evaluation of a Training Program for Teachers and Education Program Assistants

Dear School Personnel:

My name is Rebecca Carter. I am a graduate student in school psychology in the Department of Education at Mount Saint Vincent University. I am writing to invite you to participate in some research that I am doing on functional behaviour assessments with children with autism. I am doing this research with Lauren Clare, registered psychologist, who is employed in the Tri County Regional School Board. This project has been discussed with the principal of the school and the time commitment by school staff has been approved by your principal. This study has been approved by the Mount Saint Vincent University Research Ethics Board and Research Ethics Board.

Purpose of the Research

The main purpose of this study is to examine whether behaviour support plans that are devised and implemented after training in functional behaviour assessment will lead to more effective plans than behaviour support plans that are not based on functional behaviour assessment information.

Functional behaviour assessment is a process of identifying the purpose or function of a student's behaviour in relation to its surrounding environment so that appropriate interventions can be designed to meet the individual needs of the student. There are five primary outcomes of the FBA process: (a) a clear description of the problem behaviour; (b) identification of the events, times, and situations that predict when the problem behaviours will and will not occur; (c) identification of the consequences that maintain the problem behaviour; (d) development of summary statements that describe specific behaviours, situations in which they occur, and the outcomes/reinforcers maintaining the behaviour in a situations; and (e) collection of direct observation data that support the summary statements.

Understanding that challenging behaviour serves a purpose or function is the first step in developing effective interventions. If the primary function of an inappropriate behaviour can be identified, then it is possible to provide the child with an alternative, more appropriate behaviour that serves the same function within the students' behaviour support plan.

A positive behaviour support plan is a written record that summarizes the information obtained from the functional behaviour assessment and documents the intervention plan based on the FBA. Behavioural support plans are characterized by the following four features: (a) the plan indicates how staff, family, and related personnel will change and not just focus on how the individual of concern will change; (b) the plan is directly based on the functional behaviour assessment information; (c) the plan is technically sound-

that is, based on behaviour principles and laws; and (d) the plan is a good fit with the values, resources, and skills of the people responsible for implementation.

Description of the Research

If you agree to participate, you will be invited to receive an eight-hour training workshop in functional behaviour assessment. During that time you will learn the fundamentals of positive behaviour support, the functional behaviour assessment process, how to devise a behaviour support plan, and how positive behaviour support and functional behaviour assessment fits into your current school system. You will be asked to fill out a pre- and post- training assessment questionnaire and a workshop evaluation questionnaire. Once training has been completed you will be asked to carry out the FBA process on a student with autism. This will include conducting interviews with the child's guardians at the school or over the phone and observing the child's behaviour in order to develop hypothesis regarding the functions of the student's behaviour.

Interviews typically take 90 minutes to complete and involve asking parents regarding descriptions of their child's behaviour, environment and physical factors that might contribute to the occurrence of the behaviour, typical eating and sleeping routines, daily schedules, and what functions the challenging behaviours might be serving. Observations will be conducted for 2-3 days during regular school hours for approximately 1.5-2.5 hours a day. An after school meeting will then be scheduled with school staff, administration, and researchers to review the data and develop a Behaviour Support Plan. The researcher will assist in implementing the plan and will be available for questions when necessary. A meeting will be scheduled with the students' guardians to go over the behaviour support plan that has been developed. The results of this study will be provided to the school once the study has been completed.

Confidentiality

Confidentiality will be respected and no information that discloses your identity will be published without consent unless required by law. The data we collect will be analyzed and stored in locked files under the supervision of the School Psychologist assigned to the school. Your name will be deleted and replaced by a number in order to assure anonymity. Your name will not be on any of the questionnaires. The information provided by you will be kept confidential. If the results of this study are published, the publication will not contain any information that would identify you. All assessment information will be kept in locked files for 10 years and then destroyed. This information will be accessible only to the researcher, her co-facilitator and the School Psychologist assigned to the school. The behaviour support plans that are developed will be kept in the student's cumulative record folder and will be accessible to the student's teacher(s) and administration. Confidentiality is limited if a research member learns of suspected harm to a child or if the child is in danger of hurting him/herself or another student(s). In such instances, the primary facilitator and principal will be notified immediately.

Potential Benefits

The direct benefit of this study is that you will receive direct training in functional behaviour assessment and have the opportunity to conduct the functional behaviour assessment process on a student.

Potential Harms, Discomforts, or Inconveniences

You will be asked to conduct an interview with the student's parental guardians. Questions from that interview might reveal sensitive material in which both parties may feel uncomfortable.

Participation

Participation in this research is entirely voluntary. If you choose not to participate, your employment in the School Board will not be compromised.

Withdrawal from Participation

If you choose to participate, you can withdraw from the study at any time. You may contact the school principal or researcher at any point to withdraw from the study. Your employment in the School Board will not be compromised.

Contact Person

Please feel free to contact Rebecca Carter by phone or by email or Lauren Clare by email to discuss any aspects of this study.

This research study has been approved by the School Board. Please contact Assistant Director of Education Services, with any questions by phone at 555-555-5555.

School personnel may contact the school principal if you have any questions.

If you have any questions or concerns about the conduct of this study and wish to speak with someone who is not directly involved in the study, you may contact the Chair of the University Research Ethics Board (UREB) by phone at 902-457-6350 or by e-mail at research@msvu.ca.

Sincerely,

Rebecca Carter

“I acknowledge that the research procedures described above have been explained to me and that any questions that I have asked have been answered to my satisfaction. I have been informed of the alternatives to participation in this study, including the right not to participate and the right to withdraw without comprising my employment. As well, the potential harms and discomforts have been explained to me and I also understand the benefits of participating in the research study. I know that I may ask now, or in the future, any questions I have about the study or the research procedures. I have been assured that records relating to this study will be kept confidential and that no information will be released or printed that would disclose personal identity without my permission unless required by law.”

I hereby consent to participate.

Name of School Personnel

Signature

Date

Name of person who obtained consent

Signature

PARENTAL CONSENT FORM: FUNCTIONAL BEHAVIOUR ASSESSMENT

Functional Behaviour Assessment for Children with Autism: Evaluation of a Training Program for Teachers and Education Program Assistants

Dear Parent:

My name is Rebecca Carter. I am a graduate student in school psychology in the Department of Education at Mount Saint Vincent University. I am writing to ask your permission for your child to participate in some research that I am doing on functional behaviour assessments with children with autism. I am doing this research with Lauren Clare, registered psychologist, who is employed with the Tri-Count Regional School Board. This study has been approved by the Mount Saint Vincent University Research Ethics Board and School Board.

Purpose of the Research

The main purpose of this study is to examine whether behaviour support plans that are devised and implemented after training in functional behaviour assessment will lead to more effective plans than behaviour support plans that are not based on functional behaviour assessment information.

Functional behaviour assessment is a process of identifying the purpose or function of a student's behaviour in relation to its surrounding environment so that appropriate interventions can be designed to meet the individual needs of the student. There are five primary outcomes of the FBA process: (a) a clear description of the problem behaviour; (b) identification of the events, times, and situations that predict when the problem behaviours will and will not occur; (c) identification of the consequences that maintain the problem behaviour; (d) development of summary statements that describe specific behaviours, situations in which they occur, and the outcomes/reinforcers maintaining the behaviour in a situations; and (e) collection of direct observation data that support the summary statements.

Understanding that challenging behaviour serves a purpose or function is the first step in developing effective interventions. If the primary function of an inappropriate behaviour can be identified, then it is possible to provide the child with an alternative, more appropriate behaviour that serves the same function within the students' behaviour support plan.

A positive behaviour support plan is a written record that summarizes the information obtained from the functional behaviour assessment and documents the intervention plan based on the FBA. Behavioural support plans are characterized by the following four features: (a) the plan indicates how staff, family, and related personnel will change and not just focus on how the individual of concern will change; (b) the plan is directly based on the functional behaviour assessment information; (c) the plan is technically sound-

that is, based on behaviour principles and laws; and (d) the plan is a good fit with the values, resources, and skills of the people responsible for implementation.

Description of the Research

If you agree to allow your child to participate, the researcher, as well as school staff working directly with your child (classroom teacher, EPA, etc.) will spend approximately 20-30 hours over a period of 8 weeks collecting data and implementing a behaviour support plan. The staff involved will receive eight hours of training in FBA prior to conducting any observations or interviews. Following training, the researcher, teacher, and/or staff member will observe your child's behaviour for 2-3 days on 3-4 separate occasions during regular school hours. Observations are conducted in various settings and in order to capture all aspects of your child's behaviour the student's will not be aware the researcher/school staff is observing them. Your child's classroom teacher will also conduct an interview with you at the school or over the phone concerning your child's behaviour, which typically takes 90 minutes to complete. Specifically, the interview will consist of questions regarding descriptions of your child's behaviour, environment and physical factors that might contribute to the occurrence of the behaviour, typical eating and sleeping routines, daily schedules, and what functions the challenging behaviours might be serving. After observations and interviews are conducted, behaviour support plans will be developed by your child's teacher and related school personnel, under the direction of the researchers, which are based on the information collected. Behaviour supports plans will then be implemented with your child in order to decrease problem behaviours and increase prosocial, positive behaviours. A meeting will be scheduled with you to go over the behaviour support plan that has been developed for your child. The researchers will be available to assist the teachers and school staff in implementing the behaviour support plans. The results of this study will be provided to the school once the study has been completed.

Research has demonstrated the effectiveness of functional behaviour assessments in schools in reducing challenging behaviours. Conducting FBAs and the behaviour support plans that result from the assessment in schools is not a new procedure, however; this is a new assessment method and intervention process than what you're your child would typically receive from his/her school psychologist, school staff, or autism consultant. The behaviour support plans may be similar to the Behaviour Intervention Record that your child may currently have. However, for the purpose of this study, I am hypothesizing that behaviour support plans developed after training in functional behaviour assessment will lead to a more complete and effective support plan than support plans not based on this information.

Confidentiality

Confidentiality will be respected and no information that discloses you or your child's identity will be published without consent unless required by law. The information provided by you and your child will be available to the school staff (classroom teacher, principal, etc.) when developing the Behaviour Support Plan. After the plan has been

developed, the data collected from observations and interviews will be analyzed and stored in locked files under the supervision of the School Psychologist assigned to the school. This information will be kept for 10 years and then destroyed. The information will be accessible only to the researchers and the School Psychologist for your child's school. The resulting Behaviour Support Plan will be stored in the child's cumulative record folder to assist in future programming. A copy of the Behaviour Support Plan will be provided to you for your records.

If the results of this study are published, the publication will not contain any information that would identify you or your child. Confidentiality is limited if a research member suspects harm to a child or if the child is in danger of hurting him/herself or another student(s). In such instances, the primary facilitator and principal will be notified immediately.

Potential Benefits

The direct benefit of this study is found in the behaviour support plan that your child will receive as a result of his/her participation in the study. Results of the assessment can highlight the functions of your child's behaviour. Behaviour support plans are designed to alter patterns of problem behaviour by identifying the events that contribute to the likelihood that problem behaviours will occur and the consequences that may be maintaining your child's behaviours. Specific remediation strategies are built in to behaviour support plans in order to decrease problem behaviour and increase positive, prosocial behaviours.

Potential Harms, Discomforts, or Inconveniences

Potential discomforts within the study are a direct result of the behaviour support plans that are developed. The behaviour plan may include contingencies that may alter or exacerbate your child's behaviour. Often an increase in problem behaviour(s) is evident until the child has learned the consequences for his/her behaviour and the problem behaviours will decrease. If after four weeks your child's behaviour has not improved, the team will meet to revise the behaviour support plan.

School staff will also conduct an interview with you and will ask you questions in which sensitive material may be shared. This may make both parties uncomfortable. For example, parents will be asked to describe their child's behaviours, typical eating and sleeping routines, and his/her daily schedule.

Participation

Participation in this research is entirely voluntary. If you or your child chooses not to participate, you and your family will continue to have access to quality care and education in the School Board.

Withdrawal from Participation

If you choose to participate, you can withdraw your child from the study at any time. You may contact the school principal or researcher at any point to withdraw from the study. You and your family will continue to have access to quality care and education in the School Board.

Contact Person

Please feel free to contact Rebecca Carter by phone or by email or Lauren Clare by email to discuss any aspects of this study.

This research study has been approved by the School Board. Please contact Assistant Director of Education Services, with any questions by phone at 555-555-5555.

Parents can contact the school principal if you have any questions.

If you have any questions or concerns about the conduct of this study and wish to speak with someone who is not directly involved in the study, you may contact the Chair of the University Research Ethics Board (UREB) by phone at 902-457-6350 or by e-mail at research@msvu.ca.

Sincerely,

Rebecca Carter

“I acknowledge that the research procedures described above have been explained to me and that any questions that I have asked have been answered to my satisfaction. I have been informed of the alternatives to participation in this study, including the right not to participate and the right to withdraw without comprising the quality of education at my child’s school for my child and for other members of my family. As well, the potential harms and discomforts have been explained to me and I also understand the benefits (if any) of participating in the research study. I know that I may ask now, or in the future, any questions I have about the study or the research procedures. I have been assured that records relating to my child’s care will be kept confidential and that no information will be released or printed that would disclose personal identity without my permission unless required by law.”

I hereby consent for my child to participate.

Name of Parent

Signature

Date

Name of person who obtained consent

Signature

Appendix H

Certificate of Ethics Approval