

**TRANS-SITUATIONAL INTERVENTIONS: GENERALIZATION OF BEHAVIOUR
SUPPORT ACROSS GROUP HOME AND FAMILY HOME SETTINGS**

by

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES
(Special Education)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

April 2014

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Abstract

A number of studies have shown that adults living in group homes spend less time with their families. One barrier to increasing time spent with families may be that a large proportion of adults living in group homes display elevated levels of problem behaviour. Furthermore, group home staff and families may not have sufficient training to prevent problem behaviour in group home or family home settings. This study evaluates an approach that synthesizes three promising practices in the field of developmental disabilities: person-centred planning, trans-situational positive behaviour support (PBS), and the activity setting as a unit of analysis. The purpose of this study was to evaluate the efficacy and acceptability of this approach to the generalized reduction of problem behaviour for an adult with autism from a group home setting to a family home setting. One adult with autism and problem behaviour, the group home staff who supported him, and his parents participated in the study. Two settings were identified for trans-situational intervention: a group home post-dinner routine; and a family home pre-dinner routine. In collaboration with group home staff a functional assessment-based, multi-component trans-situational PBS plan (TSI) was designed for the group home routine. In addition a brief trans-situational PBS plan (tsi) for the family home was generated. A preliminary cultural fit evaluation by primary staff indicated that the plan was a good fit with group home ecology. Completion of baseline and intervention phases will occur by June 2014. Preliminary results are discussed in terms of relation to the literature, implications, cautions and limitations, and directions for future research.

Preface

This this is an original intellectual product of Benjamin Adolph Reiman. Ethics approval was given by the Behavioural Research Ethics Board on November 27, 2012. The certificate number is H12-01033.

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Acknowledgements

I am grateful to the families, group home staff and management, and the management team at the participating agency for their participation in the study. You have all been patient, kind, and shown so much love for these two wonderful men. I thank Dr. Joseph Lucyshyn for his knowledge, patience, and humility in supporting me over the years. I thank Dr. Pat Mirenda and Dr. Rick Albin for serving on my research committee, I thank Vicky Sobie for her patience, encouragement and rich contribution to data analysis. I also thank Dr. Robert Horner, Dr. Teri Lewis, and Dr. Mark Harvey for their words of encouragement and insights in regard to the study.

I also wish to thank my parents Mary Lou and Barry for their years of encouragement and support both emotionally and financially. Most of all I thank my wife Jan for her incredible patience, love, and support through this experience.

Dedication

To Jan, my best friend and my heart.

Chapter 1: Introduction

History

Since the deinstitutionalization movement began in the 1970s (Lemay, 2009; Smith, 1981) over 250,000 adults with intellectual disabilities (ID) in Canada and the United States have been living in more than 3000 group homes. (Braddock, Emerson, Felce, & Stancliffe, 2001; Lakin, Larson, Salmi, & Scott, 2009). Research suggests that more than half of adults with an intellectual disability (ID) present with mild to moderate problem behaviour (Crocker, Mercier, Lachapelle, Brunet, Morin, & Roy, 2006). Crocker and her colleagues also found that individuals with ID living in more restrictive settings such as group homes display elevated problem behaviour.

Families have reported that while group home placements resulted in increased positive benefits for the adult in care, there were fewer positive benefits for the family (Krauss, Seltzer, & Jacobson, 2005). There is evidence suggesting that when an individual lives in a group home, visits by the individual to his or her family decline (Beadle-Brown, Mansell, Whelton, Hutchinson, & Skidmore, 2006; Raynes, Wright, Shiell, & Pettipher, 1994). Raynes and her colleagues (1994) surveyed 200 staff facilities providing residential accommodation for adults with disabilities and found that 42 per-cent of the clients never visited the family home.

Many of the families I supported as a group home manager expressed a desire to spend more quality time with their son or daughter in the family home. For some families quality time meant longer visits or overnight stays. Other families wanted to have their children visit without the need for support staff. In my discussions with families, the most common barrier to success in these activities had been their perceived inability to manage the problem behaviour of their son or daughter. Furthermore, research indicates that the reduction of problem behaviour in

adults with intellectual disabilities is an important outcome for both group home managers and parents of adults living in group homes (Fox & Emerson, 2001; Seltzer & Krauss, 2001).

Numerous studies have documented the effectiveness of behavioural interventions for reducing problem behaviour among residents in group home settings (Carr & Carlson, 1993; Carr, Horner, Turnbull, Marquis, Magito-McLaughlin, & McAtee, 1999; Emerson et al., 2000; Lucyshyn, Olsen, & Horner, 1995; Shogren, Faggella-Luby, Bae, & Wehmeyer, 2004). However, most group home staff are not trained to prevent problem behaviour (Campbell, 2010; Mansell, 2006). One can surmise that if group home staff are not trained to proactively manage problem behaviour in the group home, then they would not have the knowledge to train parents to do the same in their homes.

One possible solution to this problem is to develop a highly efficient method of training parents to implement behaviour interventions and supports when they visit with their adult son or daughter in the group home or he or she visits them at home. If such a method can be shown to be effective and efficient, then group home staff in collaboration with a behaviour consultant can play a useful role in helping parents maintain meaningful connections and relationships with their son or daughter who reside in a group home, but have a propensity to engage in problem behaviour when they are with their parents.

Such a method may be found in the integration of three promising practices in the field of developmental disabilities: person-centred planning, trans-situational positive behaviour support interventions (Harvey, Lewis-Palmer, Horner & Sugai, 2003; Schindler & Horner, 2005), and the activity setting as a unit of analysis. These practices are discussed next.

Person-Centred Planning

Person-centered planning is a progression of steps for describing an individual's dreams for the future and developing an action plan to achieve those dreams (Kincaid and Fox, 2002, p. 30). The aim of a person-centred plan is to create and promote friendships; increase independence and self-determination; and promote competence, social contribution and respect (Holburn, Jacobson, Schwartz, Flory, & Vietze, 2004). There are a number of person-centred planning processes. Some of the better known methods are: Personal Futures Planning (Mount, 1994), Planning Alternative Tomorrows with Hope (PATH; O'Brien, Pearpoint, & Kahn, 2010), Essential Lifestyle Planning (ELP; Smull & Harrison, 1992), and the Lifestyle Development Process (Malette, Mirenda, Kandborg, Jones, Bunz, & Rogow, 1992). All of these methods have five essential goals in common: (a) be part of and participate in community life; (b) gain and maintain satisfying relationships; (c) express preferences and make choices in everyday life; (d) have opportunities to fulfill respected roles and live with dignity; and (e) continue to develop personal competencies (Kincaid & Fox, 2002). Participants in a person-centred planning session typically include the person with disability, his or her family, and other key stakeholders in the person with a disability's life (e.g., support worker, psychologist, pastor, neighbour). The process is usually guided by a facilitator and often utilizes graphics (markers & flipchart) to map out the discussions and document an action plan.

Holburn and Vietze (2002) discussed the benefits of person-centered planning in a group home setting for "Hal", an adult with autism preparing to transition from life in an institution to life in the community. Hal displayed severe problem behaviours including aggression, self-injury, and elopement. Hal participated in Personal Futures Planning (Mount, 1994) to develop a plan to address issues in five areas: (a) home, (b) work, (c) community, (d) choice-making, and

(e) preferences. Using these five themes as a guide, Hal's team developed a profile of strengths, preferences, non-preferences and goals, and created an action plan designed to meet the goals. As a result of the person-centered planning process, Hal was re-integrated into the community and reunited with his family. The authors further reported that, "As Hal's behaviour improved and his capabilities grew, the people around him raised their expectations, and the process seemed to cycle upwards" (Holburn & Vietze, 2002, p. 313).

Mallete et al. (1995) investigated the efficacy of a person-centred planning process called the Lifestyle Development Process (LDP). The authors presented four case studies involving two adults and two children with profound intellectual disabilities and challenging behaviours. A team was developed for each participant consisting of the individual, their family and friends, service providers, and one or more behaviour consultants. In the first step, *vision planning*, each participant's current profile (i.e., daily schedules, current placement, behaviour, communication abilities, skill deficits or excesses, caregiver skills and attitudes) was compared with the profile of typical peers without disabilities and then any discrepancies between the two were identified. These discrepancies created a baseline for the next phases. In the second step called *assessing and remediating barriers to intervention*, barriers such as staff attitudes, low funding, and lack of supports were assessed. Efforts were made to resolve all of these barriers before moving on to the next phase. In the third step, *assembling meaningful routines and schedules*, the individual's strengths, capacities, and preferences were identified and incorporated into daily and weekly activity schedules. In the fourth step, *developing specific intervention strategies*, service provider staff was trained in the use of behaviour management strategies, functional assessment, augmentative and alternate communication strategies, and systematic instructional strategies. In the final phase of the process, *evaluating effectiveness and developing a monitoring system*, the

schedules developed in step three were reviewed to determine the extent to which they reflected goals and values, and progress in eliminating the lifestyle discrepancies identified in step one was evaluated. The person-centred planning process was associated with increased resident participation in community and personal management activities, increased resident social networks, and increased staff use of best-practices in their respective programs and residential placements.

Person-centred planning also shares many features with positive behaviour support (PBS). PBS is an evidence-based practice which recognizes the importance of conducting functional assessments, designing multicomponent behaviour support plans, and training intervention agents (i.e., family, group home staff) to implement interventions in natural settings (Binnendyk & Lucyshyn, 2009). Kincaid and Fox (2002) noted ten shared features of positive behaviour support and person-centred planning:

1. a focus on comprehensive lifestyle change and quality of life outcomes;
2. consideration of life-span perspectives;
3. the importance of ecological validity (i.e., natural agents implementing supports and interventions in natural environments);
4. stakeholder participation and collaboration;
5. considerations of social validity;
6. systems change achieved through multicomponent intervention;
7. an emphasis on the prevention of problems;
8. flexibility with respect to scientific practices;
9. the use of multiple theoretical perspectives

10. intervention strategies assessed for efficacy and consumer implementation competence.

A more detailed discussion of PBS as an approach to the amelioration of problem behaviour in adults living in group homes is presented below.

Trans-situational Positive Behaviour Support Interventions

Positive behaviour support. Positive behaviour support (PBS) is a collaborative, assessment-based approach to expanding an individual's behaviour repertoire and altering deficient environmental conditions to improve quality of life and make problem behaviours irrelevant, inefficient, and ineffective (Carr, Dunlap, Horner, Koegel, Turnbull, & Sailor, 2002; Carr et al., 1999; Horner, Albin, Todd, & Sprague, 2006). Using this approach, behaviour support plans are designed based on a functional behaviour assessment (FBA; O'Neill et al., 1997). An FBA is used to identify the setting events, antecedents, and maintaining consequences of problem behaviour. FBA results are then used to design a comprehensive, multi-component PBS plan. Such plans integrate evidence-based strategies selected to address the setting events, antecedents, and consequences that occasion and maintain problem behaviour, and include teaching strategies that aim to expand the individual's behavioural repertoire (Lucyshyn, Horner, Dunlap, Albin, & Ben, 2002). PBS plans are designed to be technically sound and contextually appropriate; that is, the strategies are consistent with the laws of behaviour and are compatible with the values, skills, and resources of intervention agents (Horner et al., 2006; Lucyshyn et al., 2002).

Over the past 20 years, PBS research has documented the efficacy of the approach in school (Lewis, Sugai, & Colvin, 1998; Mass-Galloway, Panyon, Smith, & Wessendorf, 2008;

Simonsen, Britton, & Young, 2010; Todd, Horner, Sugai, & Spriggs, 1999) and family settings (Buschbacher, Fox, & Clarke, 2004; Vaughn, Clarke, & Dunlap, 1997; Lucyshyn, Albin, Horner, Mann, Mann, & Wadsworth, 2007).

In regard to community settings, there also is evidence of the effectiveness of PBS in group homes for persons with intellectual disabilities (Carr et al., 1999; Feldman, Condillac, Tough, Hunt, Griffith, 2002; Lucyshyn, Olson, & Horner, 1995; Magito-McLaughlin, Mullen-James, Anderson-Ryan, & Carr, 2002). Lucyshyn and colleagues (1995), for example, examined the outcomes of a PBS approach in a multi-method case study using qualitative and quantitative data. The focus of the study was a 26 year-old woman with autism and an intellectual disability living in a group home with another adult with autism. The young woman engaged in severe self-injurious and aggressive behaviour. The authors conducted a functional behaviour assessment and results indicated that self-injury and aggression served multiple functions: (a) avoidance of aversive situations, (b) access to preferred objects, and (c) attention from preferred people. Group home staff and family members were interviewed to determine the young woman's preferences, future goals and contextually appropriate environmental modifications. A multi-component package was designed based on the results of the functional assessment which included lifestyle/ecological interventions, antecedent interventions, the teaching of new behaviours, reinforcement procedures for desired behaviours, and a safety plan for responding to self-injury and aggression. Results indicated that the intervention was associated with the young woman's increased participation in community activities and the development of positive relationships with non-paid persons including former staff, co-workers and family members with whom she had not previously had a meaningful relationship. Problem behaviour was significantly reduced and the woman was perceived to be happier, more independent,

affectionate and more conversational. Qualitative measures suggested an improvement in interactions with group home staff and family as well as an expanded social network.

Magito-McLaughlin and her colleagues (2002) presented a descriptive case study of a 24 year-old young man with autism, a seizure disorder, and a bipolar mood disorder living in a group home with seven other residents. The man displayed multiple problem behaviours including property destruction, tantrums, aggression, running naked, and ripping off group home staff members' clothing. Prior attempts to manage these behaviours included medication, punishment, physical restraint, and bribery with food which was associated with him becoming overweight and exhibiting high cholesterol levels. A functional behaviour assessment indicated escape as the function of problem behaviour. The team conducted a series of person-centred planning sessions to develop a behaviour support plan for the young man and to find him suitable housing. The PBS plan included individualized routines, altered staffing patterns, reduced physical and chemical restraints, the removal of artificial barriers, and increased community involvement. The interventions were associated with a decrease in the range of problem behaviour episodes from 350-1100 incidents per month to less than 100 incidents per month; an increase in time spent in the community from approximately 20 minutes per month to between 190 and 260 minutes per month, a decrease in weight from 225 pounds to 175 pounds, and a decrease in cholesterol levels from 260 mg/dl to 180 mg/dl.

In an empirical case study, Jensen, McConnachie, and Pierson (2001) described the outcomes of a positive behaviour support planning process over 63 months for a 35 year-old man with autism and intellectual disability. The man lived in an institutional setting with 400 other patients and engaged in severe self-injurious behaviour, assault, and property destruction. The intervention package consisted of ongoing functional assessment and behaviour support plan

design, monthly reviews of problem behaviour episodes, and several person-centred planning sessions. The multicomponent behaviour support plan included six phases: (a) increased community access; (b) functional communication training; (c) moving to a group home; (d) a new medication and the use of a recliner chair as a replacement for a mechanical restraint chair; (e) removal of the new medication; and (f) a second move to a new group home. The first two phases occurred over 27 months in the institution and were associated with the largest decreases in problem behaviour (i.e., 26.2 episodes per month to 5.5 episodes per month). When the man moved into a group home these changes were maintained and continued to decline to near-zero levels. It should be noted that the introduction of a medication in phase IV was associated with a temporary increase in problem behaviour, which decreased when the medication was discontinued in the next phase. The authors noted the importance of ongoing functional assessments to continuously improve behavioural support and interventions, and the need to transition from crisis management to a focus on support, with particular attention to the prevention of problem behaviour.

Using an experimental, single subject research design, McClean, Grey and MacCracken (2007) implemented a process of PBS with five adults who displayed severe problem behaviour (i.e., causing very serious tissue damage to others or self). All participants were diagnosed with intellectual disabilities and significant communication deficits and four out of five lived in a group home setting. The research design was a multiple baseline across participants. Dependent measures included problem behaviour frequency; levels of depression, anxiety, and hypomania; quality of life; levels of medication; service costs; and implementation fidelity. Functional behaviour assessments revealed that the maintaining consequences for the participants' problem behaviour were escape, attention, or a combination of the two functions. Interventions were

selected across four categories: environmental accommodations, direct antecedent interventions, skills teaching, and reactive strategies. Results indicated a significant reduction in problem behaviour, a 66% reduction in the use of medication, increased quality of life scores in three out of five participants, and reductions in levels of depression, anxiety, and hypomania. The authors noted that a small increase in financial resources was required to achieve these measures. Taken together, these studies offer evidence of the effectiveness of positive behaviour support for decreasing problem behaviour and increasing quality of life for people living in group home settings.

Trans-situational interventions. Trans-situational interventions (TSIs) are positive behaviour interventions implemented in one setting that result in positive behaviour change in another setting with little or no additional intervention in the second setting (Harvey, Lewis-Palmer, Horner, & Sugai, 2003). In the first empirical study of TSIs, Harvey and his colleagues used a multiple baseline design across settings and students to investigate the effectiveness of TSIs for promoting the generalized reduction of problem behaviour across school and home settings. Three boys without disabilities in middle school who presented with durable problem behaviour at school and home participated in the study. The intervention package began with a functional behaviour assessment (i.e., teacher, student, and parent interviews; direct observations in school and home settings). Information from the functional assessment was used to design the trans-situational intervention in collaboration with each student and his teacher. The authors used a two-tiered reward system to reinforce the absence of problem behaviour. In the school-based intervention (i.e., the *TSI*) participants were given a self-management strategy for on-task behaviour with an immediate reward (i.e., Tier 1 reward) contingent on the absence of problem behaviour. In the home-based intervention (i.e., the *tsi*) participants used a similar self

management strategy for homework completion but no reward was given at home. Instead a “big” reward (i.e., Tier 2 reward) contingent on the accumulation of points earned at both school and home for task completion was given at school the next day. All parents completed a social validity survey following the intervention phase. Results showed that problem behaviour decreased substantially in the home setting with no parent training provided. The authors noted that with the use of a two-tiered reward system the second reward needed to be more powerful than any competing reinforcer in the second setting. The authors suggested that future research should consider family ecology, implementation fidelity, contextual barriers, and include other populations (e.g., developmental disabilities/autism; other cultures).

In a systematic replication of the Harvey et al. (2003) study, Schindler and Horner (2005) used a single-subject multiple baseline design to investigate the effect of a specific trans-situational intervention called functional communication training (FCT; Carr & Durand, 1985) on the reduction of problem behaviour across school and home settings for three young children with autism. The primary setting for the intervention was a one-to-one intensive teaching session in the school. The secondary settings also were in the school (i.e., snack time and explore time) but in the home as well. In the home sessions, two students were required to work on activities similar to those in the one-to-one teaching sessions from school while the third student participated in activities similar to the explore time activities at school. Functional communication skills were selected based on the results of a functional behaviour assessment. The design had four phases: (a) baseline, (b) low effort 1, (c) FCT, and (d) low effort 2. In the low effort 1 condition, with no training in the primary setting, the parents and teacher assistants in the secondary setting prompted the student’s use of the communication book or card when problem behaviour or antecedent events for problem behaviour (e.g., transitions, new activity

presentation) occurred. In the high effort TSI condition in the school setting, all students received FCT training in intensive 1:1 sessions using a communication book or card. In the secondary settings in the school and home, teacher assistants and parents were only required to prompt the use of the communication book or card when problem behaviour or antecedent events for problem behaviour (e.g., transitions, new activity presentation) occurred. The low effort 2 phase consisted of the same procedures as the low effort one phase but followed FCT training in the primary setting. Results documented significant decreases in problem behaviour and increases in the use of functional skills in the school and home settings. Parents and teaching assistants reported high ratings of contextual fit for the low effort 2 phase. The major finding of this study was the documentation of the interaction effect provided by the high effort intervention in the one-to-one setting combined with modest stimulus changes in the secondary setting (i.e., the communication card) during the low intervention. These findings suggest that trans-situational positive behaviour support interventions may be an effective and efficient means for the generalized reduction of problem behaviour across professional (group home) and family home settings.

Activity Setting as a Unit of Analysis

The third promising practice is the activity setting as a unit of analysis for assessment and intervention. Activity settings combine behaviour, the environment and the subjective experiences of those involved into a common entity (O'Donnell, Tharp & Wilson, 1993).

“[Activity settings] are the social furniture of our family, community, and work lives.

They are the events and people of our work and relations to one another. They are who, what, where, when, and why, the small recurrent dramas of everyday life, played on the stages of home, school, community, and workplace- the father and daughter collaborating

to find lost shoes, the child who plays a board game through the help of his patient brother.” (Tharp & Gallimore, 1988, p. 72).

O’Donnell and Tharp (1990) have argued that the activity setting as unit of analysis lends itself to the promotion of the generalization of treatment outcomes. It does so by offering a detailed understanding of the objective and subjective elements of everyday settings. Gallimore (2005) points out that regardless of how detailed our operational definitions of settings, changing the behaviours produced in those settings will depend on the lenses through which they are viewed. “No matter how powerful therapies might be, the odds of producing highly generalized behaviour changes are not great if they run counter to the press of everyday settings” (p. 211).

Gallimore (2005) and O’Donnell and Tharp (1990) describe six elements of activity settings that warrant consideration: (a) time and place, (b) people, (c) resources, (d) tasks, (e) goals and values, and (f) scripts of interaction. Each of these elements can be levers for behaviour change in an activity setting. Consider a father and son engaged in a dishwashing routine. The routine might occur in the kitchen in the evening after dinner (time and place). Both father and son participate in the activity (people). To complete the task of washing dishes they will need dishes, dish soap, a cloth, and a sink full of warm water (resources). Together they can agree on what dishes need to be washed, who will wash, who will dry and the proper techniques for washing different items (e.g., how to keep wine glasses from smudging or which brush is best for washing bottles) and where to put the dishes when they are dry (tasks). In addition to the goal of washing and drying the dishes, the father and son may use this time to debrief about the day’s events, problem-solve about an argument that they had at dinner, plan for another family member’s birthday surprise, or rebuild rapport, as the son has been away serving in the military (goals and values). How the father and son work towards these goals can be achieved through

conversation, reciprocity in completing the task and non-verbal communication (scripts of interaction).

Gallimore (2005) suggested that one key factor in promoting behaviour change in activity settings is the collaborative identification of settings and the goals of participants in those settings, and then selecting interventions that can be embedded in the settings. Researchers in the area of positive behaviour support with families have successfully used the activity setting as a unit of analysis within which behaviour interventions are embedded and implemented by family members. Doing so has been consistently associated with improvements in child behaviour and successful participation in family activity settings in the home and community. (Binnendyk & Lucyshyn, 2009; Buschbacher et al., 2004; Lucyshyn & Albin, 1993; Lucyshyn et al., 2007; Lucyshyn, Albin, & Nixon, 1997; Vaughn, Clarke, & Dunlap, 1997).

For example, in a case study by Vaughn et al. (1997), the mother of an 8-year-old boy with profound disabilities implemented functional assessment-based interventions in the context of two family routines: using the bathroom at home and dining in a fast-food restaurant. The two activity settings selected by the boy's mother were chosen because they were typical family routines associated with significant problem behaviour. In collaboration with the researchers, the mother described a vision of each routine completed successfully. The mother implemented hypothesis-based interventions comprised of visual supports and rewards in a multiple baseline design across home and community settings. Results showed that the boy engaged in significant reductions in problem behaviour and increases in routine engagement during intervention and follow-up. In addition, a one-session probe conducted in a new restaurant also yielded positive outcomes. Limitations of the study included a lack of data on long-term change, the absence of

experimental control due to the use of a baseline design across only two routines, and no measures of socially validity.

Buschbacher and colleagues (2004) later conducted an experimental single subject study using similar procedures and additional measures that addressed the limitations of the Vaughn et al. study. Participants in the study were a 7 year-old boy with Landau-Kleffner syndrome and his parents. Similar to the Vaughn et al. study, the researchers examined the use of functional assessment-based interventions in collaboration with the family to reduce the boy's problem behaviour and increase engagement in three valued family routines. Routines were selected as part of a person centred planning process to understand the boy's strengths and needs, and the family's dream for the boy in the short and long-term. In collaboration with extended family members, friends, the boy's teacher and other professionals, an action plan was designed to achieve these dreams. Part of this action plan included the identification of three problem routines, which became the focus of the study. Following a functional behaviour assessment, a multi-component positive behaviour support plan was designed in collaboration with the family and implemented by the parents in the context of a multiple baseline design across three routines. Results showed that problem behaviour was reduced to near zero levels and the boy's level of task engagement was substantially increased in all routines. Furthermore these gains were maintained at 12 months post-intervention. As a measure of social validity, four parents observed video recordings of baseline and intervention observation sessions and agreed that the interventions were acceptable, successful, and practical. In regard to limitations, the authors noted that the study lacked measures of family systems changes and changes in other aspects of the boy's life.

Lucyshyn et al. (2007) used a multiple baseline, single-subject research design across four settings to evaluate the functional relation between family implementation of a positive behaviour support plan and long-term improvements in problem behaviour and family routine participation for a five-year-old girl with autism. Prior to intervention, the girl's parents did everything for her (i.e., dressing, feeding, personal hygiene tasks) and avoided participation in all community activities. In collaboration with the family, four routines in the home and community were selected and defined. The routines were valued by the family but unsuccessful due to the girl's problem behaviour. In addition to measuring rates of and latency to problem behaviour during the selected routines, the authors measured daily indicator behaviours. Indicator behaviours were defined as incidents of moderate to high-intensity problem behaviour during the entire day with family members (Lucyshyn et al., 2007). The indicator data provided a rough measure of generalized behaviour improvement across a range of family settings not directly observed. The authors also measured the girl's participation in community and personal management activities using *The Resident Lifestyle Inventory* (RLI; Smith, Horner, Newton, & Kanda, 1990). Measurements of social validity and the contextual-fit of the behaviour support plan were conducted. To address the limitations of previous studies concerning durability of change, the authors conducted follow-up observation probes and quality-of-life measures using the RLI over a seven-year period. Generalization promotion strategies also were applied to generate improvements in non-trained settings. Results showed problem behaviour was reduced to near-zero levels and the girl's successful participation in targeted families routines increased from 0% to 93%. Furthermore during seven years of follow-up measurement changes maintained and activity participation increased to 100%. Family members also reported improvements in their own quality-of-life including employment gains and decreased symptoms of depression. A

limitation of the study was the gathering of indicator behavior data within a time-series design that lacked experimental control.

In a recent study, Binnendyk and Lucyshyn (2009) evaluated a family-centred positive behaviour support approach to the amelioration of food refusal behaviour in a child with autism using the activity setting of a mealtime routine as the unit of analysis. The intervention package was designed based on the results of a functional behaviour assessment and food preference assessment. A family ecology assessment was used to gather information about family goals, strengths, resources and social support available, and sources of stress to ensure the support plan was contextually appropriate (Albin et al., 1996). The researchers collaborated with the family in the design and implementation of the intervention. Two generalization promotion strategies (i.e. general case programming and parent self-monitoring; Horner & Albin, 1988; Sanders & James, 1982) also were included in the treatment package. Results showed that acceptance increased from zero levels during baseline to 63 % of intervals observed during interventions. Generalization probes also showed improvement in food acceptance and problem behaviour across five untrained foods and when the father supported the boy during the meal routine. In addition improvements in food acceptance and problem behaviour largely maintained at 26 months follow up. Social validity measures also remained high throughout the study and quality-of-life measures showed improvement from baseline to intervention.

Research on positive behavioural support with families that has used the family activity setting as a unit of analysis for assessment and intervention suggests that the activity setting contributes to stakeholder buy-in with the intervention, to the contextual appropriateness of the plan, and to the long term maintenance and generalization of treatment outcomes. Given this, the activity setting may prove to be an ideal unit of analysis for trans-situational interventions.

A Synthesis: Trans-situational Person-Centred Positive Behaviour Support

Trans-situational positive behaviour support (TSI-PBS), person-centered planning, and the activity setting as a unit of analysis provide an opportunity for to synthesize a new conceptual model that may promote better outcomes for adults with developmental disabilities living in group homes in regard to maintaining positive relationships with their families. TSI-PBS builds from the clinical and methodological strengths of PBS evident in the research on problem behaviour in adults with developmental disabilities living in group homes, including: (a) the use of functional assessment to guide intervention planning; (b) the design of multi-component intervention packages; (c) the development of collaborative partnerships with group home staff, families, and other stakeholders; (d) the emphasis on a life-span perspective and increasing quality-of-life; (e) the design of interventions that possess a good contextual fit with the focus adult's staff and family; (f) attention to the sustainability and durability of behaviour change; and (g) the promotion of generalization. Trans-situational interventions are an ideal component of this model as they are by definition, designed to promote generalized skill development and problem behaviour reduction across settings with little or no effort in the second setting (i.e., the family home).

Much of the current research on PBS in group home settings also incorporates person-centred planning. As noted above, person-centred planning shares many core features with PBS (Kincaid, 2002), such as a focus on comprehensive lifestyle change, stakeholder participation, and an emphasis on preventing problem behaviour. The goal of person-centred planning is to identify a vision of a successful lifestyle for the focus person and to determine an action plan for achieving this vision. A functional assessment-based PBS plan provides the behavioural strategies necessary to empower stakeholders and achieve the vision.

This study used a person-centred, TSI-PBS approach to the generalized reduction of problem behaviour and increase in skill development in an adult with autism living in a group home who regularly visited his family outside of the group home. The approach represents a synthesis of trans-situational intervention (Harvey et al., 2003; Schindler & Horner, 2005) and the person-centred PBS approach (e.g., Lucyshyn et al., 1995; Jensen et al., 2001; Magito-McLaughlin et al., 2002). The approach included several core features, described below.

First, the interventionist facilitated a person-centred planning session with the focus adult, his family, group home staff, and other key stakeholders (O'Brien et al., 2010). Through this process, a vision of a successful target routine considered of value to both the group home and family was identified. The routine was one that was currently unsuccessful due to the focus adult's problem behaviour both in the group home and resident's family home. This process supported the development of a PBS plan that was socially valid and had good contextual fit with the ecologies of the group home and family home. Second, the intervention was focused on improving the focus adult's behaviour in the activity setting (i.e., target routine) in the group home setting and generalizing the improvements to a similar setting in the family home. This was important because the activity setting has been identified as a unit of analysis that may promote generalization and maintenance of treatment outcomes (O'Donnell & Tharp, 1990). Third, a functional assessment of problem behaviour was completed and a technically sound behaviour support plan was designed in collaboration with group home staff. Fourth, strategies from the group home PBS plan were selected to promote generalization in the home setting. Generalization strategies outlined by Stokes and Baer (1977) were used as a guide.

The final two features of the process will be completed by June 2014. Group home staff will implement the TSI-PBS plan in the group home routine and I will provide implementation

support in the form of skills training with the staff. When the adult resident's behaviour in the group home routine improves in the group home routine, the tsi-PBS plan, a simplified version of the group home plan designed to promote generalization, will be introduced to the family's home with little to no support. Finally, multiple measures of treatment outcomes will be assessed including problem behaviour, routine steps completed, implementation fidelity, and staff and family ratings of social validity and contextual fit.

Research Problem

The purpose of this study was to evaluate the efficacy and acceptability of a person-centred trans-situational PBS approach to the generalized reduction of problem behaviour in adults with autism from a group home setting to a family home setting. The study addressed the following questions:

- 1) Is there a functional relation between the implementation of a trans-situational positive behaviour support intervention and the reduction of problem behaviour, the number of steps completed in a routine, and the latency to routine completion for an adult with autism across group home and family home settings?
- 2) How do participating family members and group home staff rate the social validity of the trans-situational positive behaviour support approach?
- 3) How do participating family members and group home staff rate the contextual fit of the behaviour support plan to the selected routines and overall family or group home ecology?

Chapter 2: Method

I served as student researcher and interventionist throughout the conduct of the study, with the Principal Investigator and my thesis advisor, Dr. Lucyshyn, providing ongoing supervision. Due to professional obligations, the study was completed through the baseline and preliminary intervention phase in one of two target routines (i.e., assessment and behaviour support plan design with group home staff).

Participant Recruitment

One requirement for approval from the UBC Behavioural Research Ethics Board (BREB) was to receive pre-approval from the agency from which I would recruit participants. In April 2012, I contacted the program director and the clinical director of the largest local agency that supported adults with developmental disabilities to request pre-approval from their agency to recruit participants for my research study. I sent them a copy of my thesis proposal and answered any questions they had. In May 2012, I received an email from the program director indicating his agreement for the agency to participate in the study. In June 2012, I received a letter of approval to recruit from the chief executive officer (CEO) of the agency. I submitted this letter of agency approval to the BREB and shortly afterward the ethics application for the study was approved by the BREB. I then contacted the CEO and provided him with a letter of initial contact, information about the study, and the criteria for participant selection. I next met with the CEO and we discussed the research activities. During the meeting, he invited me to present my thesis proposal and inclusion criteria to his management team. I did so and during the meeting provided members of the management team with letters of initial contact to give to families whom they believed met the criteria for the study.

The criteria for participant selection were: (a) a male with a diagnosis of autism and moderate to severe intellectual disability between the ages of 19 and 35 years old; (b) a history of problem behaviour in group home and family home settings; (c) exclusion from participation in valued family activities due to problem behaviour; (d) the family living within a one hour drive from the group home; and (e) the family and group home staff willing to be videotaped in the targeted routine. Individuals, who engaged in severe problem behaviour, as demonstrated by the need for physical restraint and/or medical attention, were excluded. In addition, clients who experienced active seizures were excluded.

Two members of the agency management team contacted the families of five adults with autism living in group homes. Two families expressed an interest in participating in the study and gave permission for me to contact them by telephone.

Telephone screening. When I contacted a family, I explained the purpose of the study and criteria for participation, and conducted a brief telephone-screening interview. During the interview, I gathered preliminary information about problem behaviour during home visits, the frequency of home visits, and the relationship between the family and group home staff. Based on the interview, it appeared that both families met the criteria for participation in the study. One family expressed a strong interest in participating, but due to vacation plans recognized they could not participate at that time and so declined. The second family expressed a strong interest in participating and accepted an invitation to participate in formal screening activities. I met with the parents at their home and reviewed the consent form for preliminary screening with the family. After answering questions posed by the mother and father, they signed the preliminary screening consent form. I then met with the CEO of the agency again to review the consent for agency participation in the study. This document reviewed the activities described in the initial

letter of contact and included the name of the adult with autism and the group home in which he resided. The CEO then signed the consent form.

Preliminary screening family 1: family home. Family 1 consisted of a man with autism, David, and his parents Doug and Joanne. Preliminary screening activities included: (a) a brief functional assessment using questions adapted from the Functional Assessment Interview (see Appendix A: O'Neill et al., 1997); and (b) completion of a family routine assessment using questions adapted from the Family Ecology Assessment Interview (see Appendix B; Lucyshyn, Kayser, Irvin, & Blumberg, 2002). During these interviews, the parents were asked to identify three valued routines and problem behaviours that occurred during these routines and then select one routine for the study.

Doug and Joanne described three valued routines that involved their adult son David going out into the community without his bicycle. The parents chose these routines because: (a) in the past, David participated in only a few community activities with his parents; (b) he refused to participate in activities where he could not bring or ride his bicycle; (c) David spent much of his family visit time alone in his room; and (d) his parents wanted to spend more time with David outside of the home. The parents agreed to focus on one of the settings in the form of a family going for a walk in the community routine. After selecting the routine, I collaborated with Doug and Joanne to define the content and structure of the going for a walk routine in terms of the concept of an activity setting and its six elements (Gallimore, 2005; O'Donnell and Tharp, 1990). The envisioned routine is summarized in Table 2.1.

Table 2.1 Family 1 Vision of Going for a Walk Routine

Time and place: Parent(s) and son will go for a walk on Saturday evenings leaving the home between 5:30 and 6:30 pm and walking for 15-20 minutes along a walking trail near the family home and then going to the corner store to have a treat. They will then walk back to their home. Their son will leave his bicycle at home.

Person`s present: Son, mother and/or father

Material resources: Money for a treat, proper clothing/footwear for walking, a camera

Son`s tasks: (a) turn-off TV/movie; (b) leave his room; (c) get his jacket/shoes on; (d) get his camera; (e) walk with Mom and/or Dad to the store; (f) talk with Mom and/or Dad; (g) choose a treat at the store; and (h) walk back home with Mom and/or Dad.

Parents` tasks: (a) tell son it`s time to go for a walk; (b) plan a walking route; (c) walk with son to store; (d) pay for a treat at the store; and (e) walk back home with son.

Child-centred goals and values: (a) for son to participate in more activities in the evening; (b) for son to bond with his parents; and (c) for son, when he visits his parents, to spend more time with his parents

Family-centered goals and values: for more family time during weekend evenings

Patterns of interaction: Parent makes a request and son complies. Parent(s) and son talk about sights and sounds on the walk. Parent asks son to choose an item at the store. Son chooses an item and thanks parent for purchasing the item.

A week after the family envisioned the routine, I was informed that the Doug, David's father, had suffered a mild heart attack and had been admitted to hospital for triple bypass surgery. The surgery was successful and the father was released from hospital a week later. Joanne told me they wanted to stay involved in the study after the surgery because they wanted to help their son. To mitigate any physical risk to the father, my advisor and I decided it would be prudent to get approval from the father's family physician for him to continue participation in the study. I designed a medical clearance form for the father's family doctor to read and sign if it was his professional opinion that the study would not put the father at physical risk. One month later the doctor approved his continued participation. In order for the doctor to share information about the father's follow up appointment, I also designed a 'consent to release medical information' form, which was signed by Doug.

Pilot observations were then conducted in the going for a walk routine with the family to confirm the presence of problem behaviour. During the first observation, David and his parents successfully completed all of the steps in the envisioned routine with zero occurrences of problem behaviour. Two weeks later a second pilot observation was conducted in the same routine and the family was again successful in completing the routine with zero occurrences of problem behaviour. Doug and Joanne had preplanned vacations and other commitments during the next month and so we agreed to take a break in pilot observations and resume after David's parents returned. When I met with Doug and Joanne after this break they reported that they had attempted another routine that we had previously considered and that had been previously unsuccessful as well. This activity involved the father and son attending an evening professional baseball game in Vancouver. Doug reported that the activity was successful and that David did not engage in problem behaviour and did not bring his bicycle. As the family remained interested

in participating in the study, the family and I discussed a potential third routine that would be valued by the family but they had not tried before. From this discussion, Doug and Joanne decided on a bicycle maintenance routine. David owned a mountain bicycle valued at over \$2000. The family reported that their son was hard on his bicycle and on a daily basis engaged in improper bicycle maintenance at the group home (i.e., hosing it down with water). These activities were a contributing factor to increasingly expensive bicycle repair bills. The family also reported that the bicycle damage resulted in increased levels of anxiety in David and increased levels of problem behaviour engaged in by David in the group home. The family envisioned a routine in which Doug and David performed several bicycle maintenance tasks together on a Saturday morning (see Table 2.2).

Table 2.2: Family 1 Vision of a Bicycle Maintenance Routine

Time and place: Father will help son complete his bike maintenance on Saturdays sometime between 10am and 1130am outside near the front of the house. The routine will take about 15 minutes.

Persons present: Father and son

Material resources: Son's bicycle, repair tools, bicycle pump, tire pressure gauge, chain oil, and a cloth.

Son's tasks: (a) bring his bike outside; (b) flip bike over; (c) wipe down frame and components with a dry cloth; (d) check and tighten bolts on wheels, seat, pedals; (e) oil the chain, brake and gear levers; (f) check tire pressure and pump tires; (g) test gears and brakes; (h) check and tighten horn; (i) put materials away; and (j) schedule a bike repair appointment if necessary

Parent's tasks: (a) tell son it's time to clean bike; (b) provide materials; (c) assist son with tasks; (d) help son assess problems with bike; and (e) book a repair appointment

Child-centred goals and values: (a) build skills to maintain his bicycle; (b) understand and appreciate the benefit of bike maintenance; (c) understand the difference between maintaining and repairing; and (d) reduce anxiety

Family-centred goals and values: (a) to create another activity to participate in with son; (b) stress reduction; and (c) financial savings.

Patterns of interaction: Parent makes a request and son complies. Parent(s) and son talk about bike maintenance steps. Parent and son discuss potential problems and calmly plan what to do in these circumstances to repair the bicycle.

One pilot observation was conducted in the bicycle maintenance routine. As with the other two routines, Doug and David were successful in completing the routine with zero occurrences of problem behaviour. After consulting with the parents and my advisor, we all agreed that the family's success during pilot observations, as pleasantly surprising as they were, precluded continued participation in the study. I thanked the family for their participation in the screening process, expressed my admiration for their accomplishments, and began the process of identifying another family for the study.

Preliminary screening family 2: family home. Following consultation with my advisor, I contacted the other family who had previously met criteria for participation. They had returned from their vacation and expressed an interest in participating in the screening process. Using the preliminary screening procedures described above (see pp. 3-6), the family identified one valued family routine that was unsuccessful due their adult child's problem behaviour. Pilot observations were conducted in the envisioned routine identified by the parents. Across three pilot observations, the occurrence of problem behaviours was confirmed. Having identified a family routine that met study criteria, preliminary screening activities were initiated in the group home.

Preliminary screening family 2: group home. As noted above, the participating agency's CEO had previously, in consultation with group home staff, given consent for the agency and its staff to participate in the study. The next step was to gain informed consent from the group home staff who supported Michael in the group home in which he resided. I met with one group home staff and the group home manager. Both employees were full-time staff and spent the most awake time with the group home residents. I met with each staff person individually, reviewed the preliminary screening consent form, and answered any questions they

had. Following this review, each staff person signed the consent form. Using the preliminary screening methods described above and the routine envisioned by the family as a model, the group home staff identified one valued routine that matched closely to the routine envisioned by the family. One pilot observation was then conducted in the envisioned routine identified by staff. When problem behaviours were confirmed in the pilot observation, I invited both the family and group home staff to participate in the study. I met with the family at their home and reviewed the formal study participation consent form with them. Both the mother and father signed the consent form. I then met with the group home staff and group home manager individually and reviewed the formal study participation consent form. Following this review, each staff person signed his or her respective copies of the consent form.

Participants¹

Group home participants included Siobhan, a group home staff and David, the group home manager. Family participants included: Michael, a 34 year old adult with autism, Michael's parents, Susan and Roger, Michael's brother Sean and fiancée, Denise. Susan and Roger were both retired and lived less than ten kilometers from Michael's group home. When Michael was young, Susan was the primary caregiver and dedicated time researching and learning about autism. This included taking workshops and a university level course on autism. She continued to be the primary caregiver when Michael visited with the family every Sunday for an overnight visit. Roger's mother had a diagnosis of Alzheimer's disease and Roger spent Sunday mornings visiting his mother and as a result preferred to spend less time with Michael during visits. Michael's brother, Sean, and fiancée, Denise, lived a few blocks from Susan and

¹ All names are pseudonyms

Roger. Sean and Denise joined the rest of the family for dinner on Sunday evenings. Michael lived in the same group home with two other men.

Settings

The study included two settings: the group home trans-situational intervention (TSI) setting and the family home trans-situational intervention (tsi) setting. These are defined below.

Group home TSI setting. As described above, the group home TSI setting was defined in collaboration with group home staff in terms of the six elements of the activity setting as defined by Gallimore (2005). The group home staff envisioned an after dinner routine in which Michael would engage in a leisure activity in the dining room while staff cleaned-up after dinner. In addition, during the middle of the routine, Michael would engage in a brief chore that was helpful to staff. The envisioned routine was then summarized into a one-page operational definition (see Table 2.3). The TSI designation indicated that a comprehensive, multi-component PBS plan, designed in collaboration with the group home staff, would be implemented in the post-dinner routine.

Table 2.3: Group Home Vision of a Post-Dinner Routine

Time and place: At approximately 4:00 pm, staff will ask Michael to sit-down at the dining room table. Michael will engage in a preferred activity while remaining seated at the table for two 10 minute intervals, getting up in between intervals to engage in a helpful activity (e.g., empty dishwasher, set table, or do laundry).

Persons present: Two staff, two other residents, and Michael

Material resources: Dining room table and chair, age-appropriate leisure activity, chore materials (e.g., dishes and dishwasher, tableware, laundry and wash machine).

Michael's tasks: (a) sit down for two 10 minute intervals at the dining room; (b) engage in leisure activity appropriately; (c) interact while maintaining personal space and not interrupting conversations; and (d) doing chores for the house.

Staff's tasks: (a) tell Michael to sit down at dining room table; (b) make dinner; (c) work in the office; (d) support another person-served with personal care tasks; (e) engage in conversation with Michael; and (f) administer medications

Person served-centred goals and values: (a) to be a "good man"; (b) to reduce anxiety around future activities; and (c) to increase positive time with staff and roommates.

Staff-centred goals and values: (a) to reduce stress; and (b) to reduce interruptions and for Michael to wait his turn to speak

Patterns of interaction: Staff makes a request and Michael complies. Staff and Michael talk about dinner preparation. Michael engages staff and roommates appropriately. Staff talks to Michael about leisure activities.

Family home tsi setting. As described above, the family home tsi setting was defined in collaboration with Michael's parents in terms of the six elements of the activity setting as defined by Gallimore (2005). Michael's parents envisioned a before dinner routine in which Michael would sit on a bar chair at a kitchen island counter and engage in appropriate conversation with family members and/or engage in an age appropriate leisure activity. The envisioned routine was then summarized into a one-page operational definition (see Table 2.4). The tsi designation indicated an abridged PBS plan with core components from the comprehensive TSI-PBS plan would be implemented in the post-dinner routine.

Table 2.4: Family 2 Vision of a Pre-Dinner Routine

Time and place: At approximately 5:00 pm Mom will ask son to sit-down on a bar chair at the kitchen island counter. Son will remain seated at the counter for two 10 minutes intervals getting up in between intervals to engage in a helpful activity (setting the table, getting something for Mom, serving snacks).

Persons present: At home during the routine will be son's parents and his brother and his brother's fiancé.

Material resources will include: a chair for son to sit on, the kitchen island counter, and any leisure materials.

Son's tasks: (a) sit down for 10 minute intervals at the kitchen island; (b) interact appropriately with his family (i.e., interacting while maintaining personal space while not interrupting conversations); (c) answer the door when the doorbell rings; and (d) do helpful tasks for mom.

Mother's tasks: (a) tell son to sit down at counter; (b) make dinner; (c) act as hosts for brother and fiancé; and (e) serve dinner.

Father's tasks: (a) support mother as needed; (b) engage brother and fiancé; and (c) engage in other tasks around the house.

Brother in-law/fiancé's tasks: sit at kitchen island counter or couch and interact with family members.

Patterns of interaction: Parent makes a request and son complies. Parent(s) and son talk about dinner preparation. Son engages family and dinner guests appropriately.

Measurement

The study used a multiple-probe measurement procedure to monitor the dependent variables and document implementation of the independent variable (Horner & Baer, 1978).

Equipment and materials. Observations were recorded using a small high-definition video recorder with a wide-angle lens and an attached condenser microphone for recording sound. Video recordings were imported into a video player program (Sony™ Picture Motion Browser). Sony™ Picture Motion Browser automatically displays time passing in seconds as the digital video plays and converts the video into ten second clips. Data sheets for recording termination criteria, steps completed and intervals of problem behaviour and a pencil were used to record data.

Dependent variables. The study had seven dependent variables: (a) percentage of steps completed successfully by Michael; (b) latency in minutes to termination of the routine due to problem behaviour or to successful completion of the routine; (c) percentage of intervals of problem behaviour exhibited by Michael; (d) average rating of social validity; (e) average index of the behaviour support plan's contextual fit with the group home and family home ecology; (f) self efficacy; and (g) fidelity of implementation of strategies in the behaviour support plan by group home staff and by family members. These are defined below.

Percentage of steps completed in target routines. Steps to complete in each routine reflected those that the parents and group home staff described in their envisioned routines. These are presented in Table 2.3 (Group Home Routine) and Table 2.4 (Family Home Routine). A “successful step” occurred when the participant completed the behavioural requirements of the step and the criterion for problem behaviour was not reached during that particular step. If the criterion for termination of the session did not occur, the number of steps completed during the

routine was recorded. If the criterion for termination did occur, the number steps completed before termination of the routine was recorded. Percentage of steps completed was recorded as the number of routine steps performed correctly before the criteria for termination were met divided by the total number of steps in the routine multiplied by 100.

Latency in minutes. To minimize physiological and psychological risks to staff and family members, a criterion level of problem behaviour to terminate an observation session was defined for each setting with the group home staff and with parents respectively (Lucyshyn et al., 2007). Latency in minutes was defined as the number of minutes that elapsed from the start of the routine to: (a) the first instance of intolerable problem behaviour (e.g., one strike at staff); (b) three to five instances of tolerable problem behaviour (e.g., three instances of stomping feet); or (c) successful completion of the target routine. Latency in minutes to successful completion of a target routine was defined as the time to successful completion of all of the critical steps in a routine without the occurrence of the termination criteria.

Percentage of intervals of problem behaviour. Problem behaviours were defined as door slamming, physical aggression (e.g., hitting or kicking), touching others (e.g., tickling, grabbing, putting head on shoulder), interrupting others, disrupting others (e.g., repetitively asking the same questions, entering kitchen), and inappropriate comments (e.g., shoo, go home) A partial interval recording system was used to measure the percentage of intervals of problem behaviour. The observation interval was 10 seconds in length. An occurrence was scored if any problem behaviour was observed during the interval. The percentage of intervals of problem behaviour was calculated by dividing the number of intervals of problem behaviour by the total number of intervals and then multiplying by 100.

Social validity. Due to the study's incompleteness, social validity data has not yet been collected. Group home staff and parents will complete a ten-item instrument with a 5-point Likert-type scale (i.e., 1=disagree; 5= agree). The scale will be completed six times throughout the study (i.e., twice during group home intervention, twice during family intervention, and twice during follow-up). Data will be summarized as an average rating of social validity (see Appendices C & D). In addition, independent observers who are familiar with resident behaviour in group homes or in family homes (i.e., graduate students) will complete the Rating Scales of Parental Affect (Schreibman, Kaneko, & Koegel, 1991) while viewing video recorded sessions. The measure includes three scales of parent affect: (a) enthusiasm, (b) interest, and (c) happiness. Each area is rated on a 6- point Likert scale (0-1 is negative, 2-3 is neutral, and 4-5 is positive).

Self-efficacy. Due to the study's incompleteness, self efficacy data has not yet been collected. Group home staff and family members will complete the Difficult Behaviour Self-Efficacy Scale (Hastings & Brown, 2002; Hastings & Symes, 2002). This five-item scale will be completed once before intervention, once after intervention, and once during follow-up by staff and family members.

Contextual fit. A contextual-fit assessment adapted from Albin, Lucyshyn, Horner, and Flannery (1996) was used to evaluate how well the positive behaviour support plan fit with the group home and with family life (see Appendices E & F). Due to the study's incompleteness, contextual fit data has not yet been collected in the family setting. Items focused on areas relevant to contextual fit: Goals and values of implementers (e.g., "Does the plan address your high priority goals for your son or daughter and your family?"); skills required to implement plan (e.g., "Are you comfortable with what you are expected to complete?"); alignment with lifestyle (e.g., How well does the positive behaviour support plan fit with the daily routines of your

family?); consideration of the group home resident and family strengths (e.g., “Does the plan recognize and build on positive contributions your son or the resident has made to the family or group home?”); and sustainability (e.g., Do you believe you can keep using the support strategies for more than a year even with less support from the behaviour consultant and team?”). The scale was completed once during group home intervention, after the PBS plan was designed in collaboration with group home staff. The contextual fit assessment will be completed six times throughout the study (i.e., twice during group home intervention, twice during family intervention, and twice during follow-up).

Implementation fidelity. Due to the study’s incompleteness, implementation fidelity data have not yet been collected. Implementation fidelity will be measured using a data sheet designed to record parent and group home staff accuracy of use of behaviour support strategies. Video recordings of staff and parents implementing behaviour strategies will be coded using a data sheet that briefly describes each setting event, antecedent, teaching, and consequence strategy from the PBS plan. A partial interval recording procedure will be used. The observation interval will be 30 seconds. An occurrence will be scored if the staff or parent(s) accurately use one or more behaviour support strategies during the 30-second interval. An erroneous occurrence will be scored if the staff or parent(s) makes an error in implementation of one or more strategies. A non-occurrence will be scored if the staff or parent(s) does not engage in any strategies during the 30 second interval. The percentage of intervals of implementation fidelity will be calculated by dividing the number of intervals of accurate use by the total number of interval and multiplying by 100. Fidelity of implementation measures will be conducted across 20% of intervention phase observation sessions.

Interobserver Agreement

Observer training. I was the primary observer and a graduate student in the Special Education program at the University of British Columbia (UBC) was trained to conduct interobserver observations and to collect and score the data as described above. A written manual was provided to the observer containing the observation and coding protocols and procedures. The manual included operational definitions of the problem behaviour and examples, non-examples, and questionable examples of all problem behaviour being measured. We observed digital video files of observation sessions, and used a paper and pencil coding system to score data. A random sample of videotaped baseline probe observations was used to train the observer to code percentage of steps completed, latency to termination or completion of routine, and percentage of intervals of problem behaviour. The observer was trained to a criterion of 85% interobserver agreement across two consecutive observation sessions in each setting. During baseline IOA observation sessions, when an IOA session yielded an IOA score of less than 80%, retraining occurred until a criterion of 85% IOA was reached once again. During the completion of the study, refresher training will occur at the start of each phase of the study.

Interobserver agreement procedures. In the group home setting, IOA sessions were completed for 28.9% of observation sessions for percentage of routine steps successfully completed, latency in minutes, and percentage of intervals of problem behaviour. Due to the incompleteness of the study, IOA sessions were not completed for the family home setting. IOA sessions balanced across settings and phases will be completed by June 2014.

During an IOA session for each measure, the graduate student and I independently observed and coded the digitized observation session using the paper and pencil coding system. I then compared my coded experimental observation session data sheet with the matching

independently coded IOA observation session data sheet and computed a total agreement score. The formula used was agreements divided by agreements + disagreements, multiplied by 100.

IOA for percentage of steps successfully completed. The graduate student and I scored the number of: (a) critical steps successfully completed during the observation session (an “occurrence”); (b) critical steps that were not completed due to problem behaviour (a “non-occurrence”); and (c) steps that were not successfully completed because the opportunity was not presented, although required (a “no opportunity non-occurrence”). An agreement occurred when both the graduate student and I recorded an occurrence, a non-occurrence, or a no opportunity non-occurrence during the same step of the routine. Average percentage agreement for steps completed was 100%.

IOA for latency in minutes. The graduate student and I scored the occurrence of criterion behaviour and the time of termination or successful completion during the observation session. An agreement occurred when both the graduate student and I recorded an occurrence of criterion behaviour at the same time, and when we recorded the same clock time (plus or minus 5 seconds) to session termination or successful completion of the routine. Average agreement for latency in minutes was 100%

IOA for percentage of intervals of problem behaviour. The graduate student and I scored the occurrence of: (a) problem behaviour observed in a 10 second interval (an “occurrence”); and (b) the absence of problem behaviour observed in a 10 second interval (a “non-occurrence”). An agreement occurred when both the graduate student and I recorded an occurrence or a non-occurrence during the same step of the routine. Average percentage agreement for percentage of intervals of problem behaviour was 94%.

IOA for implementation fidelity of PBS plan strategies. The experimenter and the observer will observe the same video recording of an observation session and score the number of 30 second intervals in which: (a) the parent or staff displays accurate use of the strategies outlined in their respective PBS plans (an “occurrence”); (b) the parent or staff displays inaccurate use of the strategies outlined in their respective PBS plans (an “erroneous occurrence”); or (c) the parent or staff is not observed using any of the strategies outlined in their respective PBS plans (i.e., a “non-occurrence”). An agreement will occur when both the observer and I record an occurrence, an erroneous occurrence, or a non-occurrence of a strategy during the same 30 second interval.

Research Design

A multiple baseline probe design across settings was employed (Horner & Baer, 1978). The design had three phases: Baseline, intervention, and follow-up. I chose this design for three reasons: (a) the intervention includes teaching the adult with a disability new behaviours and/or skills which cannot be withdrawn once taught; (b) as the study is concerned with the generalization of behaviour from one setting to another, a design across settings is most appropriate; and (c) in the family home setting, continuous, daily measurement was not practical for the family and so a probe design was more appropriate. The study also employed a combined design element in the form of a withdrawal phase (Kennedy, 2005) in the group home setting. I chose this design because of its ability to provide a clear demonstration of the existence of a functional relation between the independent and dependent variables (Cooper, Heron, & Heward, 2007; Kratochwill et al., 2010), thus meeting experimental evidence standards for single-case research designs (Kratochwill et al., 2010).

Procedures

Research and intervention procedures consist of the following: (a) baseline; (b) trans-situational PBS planning and intervention; (c) return to baseline in group home; (d) reinstatement of intervention in group home; (e) intervention in family home and (e) follow-up. These procedures are described below.

Baseline. Baseline observations were conducted in the target group home routine and family home routine. I videotaped the participant in each target routine. A probe observation was terminated when the participant met the criterion levels of problem behaviour or all critical steps in the routine were successfully completed. Observations continued until a stable baseline with a minimum of three data points were documented.

Intervention. The intervention phase consisted of the following steps: (a) person-centred planning; (b) functional behaviour assessment; (c) trans-situational PBS planning; and (d) implementation support.

Person-centred planning. For this study, I adapted concepts from Planning Alternative Tomorrows with Hope (PATH; O'Brien et al., 2010). A PATH session is a team-oriented process for identifying short-term and long-term goals for the individual and his or her support network. Kincaid and Fox (2002) suggested that "one of PATH's strengths is that it provides clear time lines for achieving goals and breaks those goals into measureable and achievable steps" (p. 32). The PATH session included Michael, Susan, Siobhan, and Peter (a pseudonym), an agency representative. I acted as facilitator for the session. Using a flipchart and markers, I documented each step of the session. As facilitator I led the participant and team members through seven phases, summarized below.

The dream. In this initial phase I facilitated the group to look into the future and think about where they would like to see Michael in five to ten years. I encouraged the members to imagine Michael engaged in activities they believed he would enjoy without considering current barriers in his life (e.g., problem behaviour, skill deficits, finances).

Generating a vision. I guided the group to look forward one year and we considered what was positive and possible for the focus person. During this phase the family reiterated and confirmed their vision of a successful target routine at home (previously identified during the screening process).

Describing the now. In this phase, I facilitated the group as they described where Michael was presently in his life. The focus was on facts (e.g., current living situation, perceived quality of life, current level of success in target routine)

Inviting enrollment. I encouraged the focus person to be an active participant in the process by inviting those present and possibly others not present to join him or her on this journey. I created a checklist on the flipchart that included the names of those in the room, family members and staff who sent their regrets, and other people that were previously identified as important to Michael. Members of the planning circle encouraged Michael to respond when I asked him who he would like to have support him. If he said yes to a name then I placed a checkmark in the box next to the name. If he said no then I left the box empty.

Developing strengths. In this phase, I facilitated the group in assessing the capacities of the focus person and other circle members. We discussed people the group knows and can access for support, associations and groups that could be resources, and what knowledge and skills the focus participant and the group currently had. We then assessed what the needs were in those same areas.

Identifying bold steps. In this phase, I facilitated the group to develop an action plan to achieve the vision described in phase one. This step included a reference to the trans-situational positive behaviour support (PBS) plan. The PBS plan would serve as a key action item in realizing this vision.

Organizing the next month. We identified goals and action items for the month, beginning the day of the person centred planning session, based on the information gathered in steps four and five. The members of the planning circle were encouraged to choose goals from those steps that they can work on. The group also agreed on a method of reconnecting by phone or in person for the duration of the month.

Agreeing on next steps. In this phase, I guided each group member to think about and chose one thing they could do in the next 24 to 72 hours that would help move towards the vision. I gave group members an opportunity to request support in taking the first step and to decide who they would check in with to debrief on how their first steps went. I closed the meeting by giving everyone an opportunity for final thoughts, appreciations or feelings about the meeting, and those were recorded.

Functional behaviour assessment. The Functional Assessment Interview (FAI), developed by O'Neill et al. (1997) was completed with the group home staff. I served as the interviewer, posing all questions. The FAI was completed over two one-hour sessions. After the FAI, the group home staff and I operationally defined Michael's problem behaviours and developed hypotheses about the: (a) setting events that set the stage for problem behaviour, (b) immediate antecedent stimuli that triggered problem behaviour, and (c) maintaining consequences of the problem behaviours.

Following the formation of hypothesis statements, I conducted functional assessment observations (FAO) to confirm the hypotheses formulated by the FAI. The FAO involved direct observation of the post-dinner routine in the group home setting. Videotaped observation sessions during baseline were used for this purpose. Using the FAO form, I observed the digital video files and documented the time the problem behaviour occurred, the antecedents and the consequences of problem behaviour and my perception of the function of problem behaviour during the event in which the behaviour occurred.

The functional assessment indicated that Michael engaged in problem behaviour maintained by two functions specific to the post-dinner routine: (a) attention from staff; and (b) escape from a demand, undesired task or activity, or from another group home resident. The functional assessment indicated that Michael engaged in three categories of problem behaviour maintained by attention (i.e., interrupting; disrupting; and inappropriate comments) and two categories of problem behaviour maintained by escape (i.e. inappropriate comments; and door slamming).

Functional assessment results also indicated that several ecological conditions appeared to contribute to Michael's problem behaviour in the post-dinner routine. The setting events were Michael's inability to predict daily activities, changes in staff, and upcoming meals. Michael would repeatedly ask group home staff questions that they had recently answered about future events (e.g., asking what's for dinner less than a minute after asking the same question, receiving an answer and verbally acknowledging the answer). The setting event specific to problem behaviour maintained by attention was less opportunity for 1:1 attention during the routine. The setting event specific to problem behaviour maintained by escape was Michael being in a bad mood.

The antecedents that occasioned problem behaviour maintained by attention included: (a) people talking to other people and not Michael; (b) people in the area not talking to Michael; (c) a new staff or person in the same vicinity as Michael; and (d) staff ignoring attempts by Michael to get their attention. The antecedents that occasioned problem behaviour maintained by escape included: (a) staff giving multiple demands or prompts; and (b) one of Michael's roommates screaming.

Results from the functional assessment were used to develop summary statements and competing pathways diagrams for the post-dinner routine. The diagrams outlined the four features of problem behaviour in the routine: setting events, antecedent triggers, problem behaviour, and maintaining consequences (i.e., function of problem behaviour). The diagram also identified desired behaviours for the post-dinner routine and acceptable alternative replacement behaviours. The competing pathways diagrams are detailed below (See Figures 2.1 and 2.2).

Figure 2.1 Competing behaviour pathways diagram for group home post-dinner routine: attention function

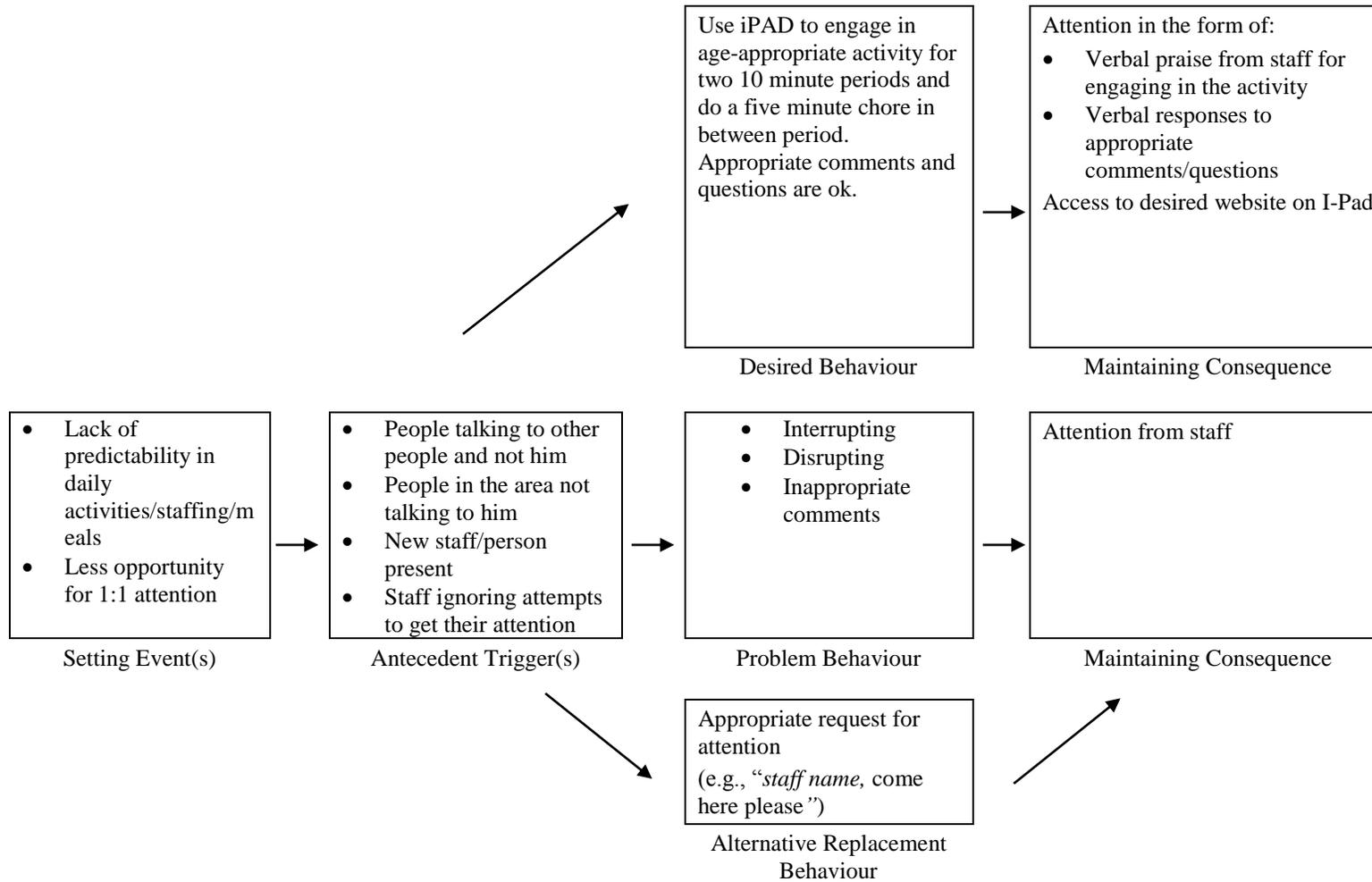
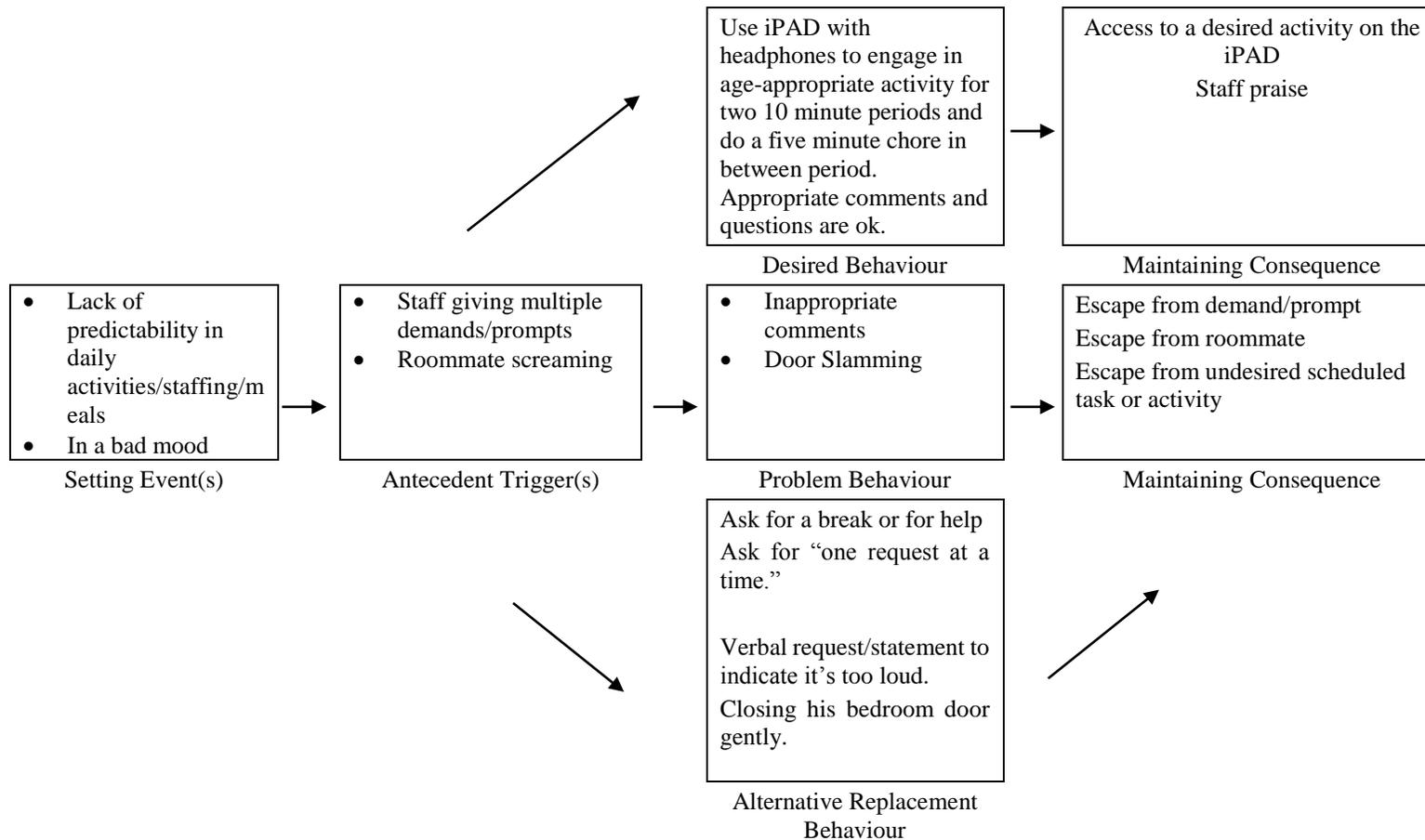


Figure 2.2 Competing behaviour pathways diagram for group home post-dinner routine: escape function



Trans-situational PBS planning and intervention. A typical PBS plan consists of strategies designed to effect change across each component of the competing pathways diagram. These include: (a) setting event strategies (Horner, Vaughn, Day, & Ard, 1996), (b) antecedent strategies (Luiselli, 2006), (c) teaching strategies (Durand & Merges, 2001; Kern, Ringdahl, Hilt, & Sterling-Turner, 2001), and (d) consequence strategies (Maag, 2001; Kern, 2005). I identified strategies that would: (a) promote improvements in Michael's behaviour and participation in the post-dinner routine in the group home; and (b) promote generalization of these improvements in Michael's behaviour to the pre-dinner routine with family members in the family's home by using generalization promotion strategies described by Stokes and Baer (1977). There were two sub-phases of trans-situational planning and intervention: (a) trans-situational planning and intervention in the group home (TSI-group home); and (b) trans-situational planning and intervention in the family home (tsi-home). These two sub-phases are described below.

TSI-group home. The competing behaviour pathways diagrams in Figure 2.1 guided the design of a technically sound plan that aimed to render problem behaviour irrelevant, ineffective, and inefficient at achieving its purpose. After generating a draft of the multi-component PBS plan for the group home post-dinner routine, I met with Siobhan to collaboratively review the logically linked support strategies in the proposed plan. Based on her feedback, strategies were revised or removed to ensure contextual fit in the group home setting. The finalized TSI-group home PBS plan is detailed in Figure 2.3 below.

Figure 2.3 Logically linked support strategies derived from functional assessment

Setting Event Strategies	Preventative Strategies	Teaching Strategies	Consequence Strategies
<p>Portable picture board what's on today's menu, and when preferred activities will happen (e.g. evening walk, phone call to mom)</p> <p>Embed reinforcers in tasks/activities/supports:</p> <ul style="list-style-type: none"> • offer time on Wii, train set, use vacuum, keyboard when you have to talk to someone else or you need Michael to wait • Sing favourite songs during non-preferred or difficult activities • Go for a walk prior to commencing the routine <p>Initiate conversation, social games (e.g. I spy, singing games) throughout the day with Michael</p>	<p>Use safety signals with Michael to indicate when you can give him 1:1 attention. (e.g., I'm going to talk to Joe until this timer rings then I'll talk to you)</p> <p>Use positive contingency statements: "First play with iPad then we can go for a walk!"</p> <p>Use pre-corrections to remind Michael to (a) check the picture board when activities will occur, and what meals are coming up; and (b) ask for attention or help</p> <p>Present requests in the context of choice (e.g., instead of saying: "go play iPad", say "do you want to watch trains or play a game on the iPad?")</p> <p>When roommate is vocalizing tell Michael "he's speaking" or "he's singing"</p>	<p>Teach Michael to use iPad to access preferred video, music, and/or games while wearing headphones</p> <p>Teach Michael how to use picture board to identify what's on the menu, and scheduled activities</p> <p>Teach Michael to initiate and sustain conversation with staff using appropriate comments and questions (e.g., asking for help, saying his roommate is too loud)</p> <p>Teach Michael to close his bedroom door gently.</p>	<p>When Michael:</p> <ol style="list-style-type: none"> (a) initiates conversation appropriately (b) uses the iPad appropriately (c) complies with a request (d) closes his door gently <p>then provide praise immediately</p> <p>When Michael engages in minor problem behaviour (i.e., disrupting or touching) move away three feet or more from Michael, actively ignore any comments and redirect back to the iPad with a gesture. (e.g., "Michael, sign for 'think' then point to activity")</p> <p>If Michael engages in major problem behaviour (i.e., hitting, pushing) say "look at me please Michael" and redirect Michael to sit down; move three feet away; encourage other persons-served to go to a safe area; actively ignore problem behaviour and redirect Michael back to the iPad with a gesture</p> <p>When Michael slams the door knock on the door open the door and go in when he appears calm prompt him to close the door gently.</p>

The multicomponent TSI-PBS plan will be implemented in the group home post-dinner routine. An implementation plan will be developed that defines: (a) training materials and support activities; (b) participant and investigator roles and responsibilities; and (c) a timeline for the completion of the support. During training, Siobhan will be provided with a written copy of the TSI-PBS plan and a 1 to 2-page implementation checklist of plan strategies that Siobhan can use to self-monitor and self-evaluate her implementation of the plan. Training will occur in the group home during the natural time of the routine. I will train Siobhan to implement these strategies using the steps of competency-based training described by Reid and Parsons (2005; see Table 2.5). Intervention in the post-dinner routine in the group home will continue until: (a) the data indicate that a minimum of 80% of routine steps are successfully completed; (b) the data indicate that problem behaviour are at near zero levels; and (c) a minimum of one data point is collected.

Table 2.5 Steps of Competency Based Training

-
1. Provide learner with a written description of the procedures.
 2. Describe the procedures verbally to the staff and invite questions.
 3. Model how to perform each strategy for the staff
 4. Role-play each procedure with the staff and provide feedback (i.e., positive comments on correct actions and informative comments on actions needing improvement) to staff on their accuracy in use of the procedure.
 5. Observe the staff performing each procedure with the focus adult and provide coaching as needed.
 6. Repeat step 3-5 until the staff demonstrates proficiency in the procedure.
-

TSI-family home. The tsi-family home PBS plan will be developed in collaboration with group home staff, and will be based on core components of the TSI group home plan. These components will be technically consistent with the functional behaviour assessment results and identified by Michael's family as low effort. These features will be incorporated into an intervention designed to require: (a) minimal time to set-up or implement; (b) minimal change in procedures or effort on the part of parents; and (c) the use of skills already mastered by the parents (Schindler & Horner, 2005). Low effort is defined as:

“a function of both the current skill level of the interventionist [teacher, parent] and the technical and procedural demands of the intervention. A [group home staff] or parent who is highly trained and experienced in behavioural interventions may find complex interventions to be of low effort, whereas a different interventionist with less training and

experience may find the same interventions to be very difficult or effortful” (Schindler & Horner, 2005, p. 41)

The tsi-PBS plan will be conducted in the pre-dinner routine with family members in the family’s home. The family home pre-dinner routine will involve a similar set of tasks and expectations as the group home post-dinner routine. In a similar fashion to staff training in the group home, an implementation plan will be developed with the family to support the families’ implementation of the tsi-PBS plan in the target home routine. The implementation plan will include a description of: (a) training materials and support activities; (b) participant and investigator roles and responsibilities; and (c) timeline for completion of the support. Competency based training as described above will be used to teach each family member (see Table 2.5). Training will occur in the family home during the natural time of the selected routine. This phase will continue until: (a) the data indicate that a minimum of 80% of routine steps are successfully completed; (b) the data indicate that problem behaviour are at near zero levels; and (c) a minimum of five data points are collected.

I included generalization promotion strategies in the TSI group home PBS plan that are likely to promote generalization to the tsi family home setting. These generalization promotion strategies are listed in Table 2.6 and represent a subset of generalization promotion strategies described by Stokes and Baer (1977) plan. These are: (a) sequential modification; (b) natural maintaining contingencies; (c) program common stimuli; and (d) train to generalize (see Table 2.6).

Table 2.6: Generalization Strategies for the TSI Family Home Setting

Generalization Category	Support Strategy
Sequential Modification	<ul style="list-style-type: none"> • Teach using iPad in family home
Natural Maintaining Contingencies	<ul style="list-style-type: none"> • Reinforcing Apps on iPad
Program Common Stimuli	<ul style="list-style-type: none"> • Portable Picture Board • Timer for Safety Signal • iPad and Apps • Sitting at table engaged in activity
Train to Generalize	<ul style="list-style-type: none"> • Provide praise for appropriate behaviours

Return to baseline in group home. During this phase, Siobhan will refrain using the strategies in the positive behaviour support plan. She will not have access to any of the program materials (e.g., portable picture board, timer) and any iPad software installed after baseline observations will be temporarily removed from the iPad. I will coach her to respond to Michael as she did in the initial baseline observations. This phase will commence after three data points in the previous intervention phase indicate an improvement in problem behaviour and steps completed in the post-dinner routine. A minimum of three data points will be collected in the return to baseline phase.

Reinstatement of intervention in group home. During this phase, Siobhan will again implement the positive behaviour support strategies in the TSI plan as before in the first intervention phase. Prior to reinstatement of intervention, I will review the strategies with Siobhan to increase the likelihood of fidelity of implementation. This phase will continue until: (a) the data indicate that a minimum of 80% of routine steps are successfully completed; (b) the data indicate that problem behaviour are at near zero levels; and (c) a minimum of five data points are collected.

Follow-up. The follow-up phase will begin when: (a) stability in the improvement of problem behaviour and successful routine participation has been established; and (b) the family and group home staff have demonstrated the ability to implement the strategies in their respective PBS plans accurately with little to no support. Follow-up measurement in the group home and family home routines will occur post-intervention once a month for two consecutive months. Additional training and support will be provided as needed after each follow-up observation session.

Chapter 3: Results

The following four dependent variables have been partially measured: (a) percentage of steps successfully completed; (b) latency to termination or successful completion of routine; (c) percentage of intervals of problem behaviour; and (d) average index of the behaviour support plan's contextual fit. Results and analysis of each of the above dependent variables are described below.

Percentage of Intervals of Problem Behaviour

Figure 3.1 presents the results for percentage of intervals of problem behaviour during the baseline phase for the post-dinner routine and pre-dinner routine.

Post-dinner routine. Seven baseline sessions were conducted in the post-dinner routine. Results show moderate and stable levels of problem behaviour with an average of 42.0% of intervals with problem behaviour (range, 14.9%-61.1%).

Pre-dinner routine. Three baseline sessions were conducted in the pre-dinner routine. Results show moderate and somewhat variable levels of problem behaviour with an average of 44.0% of intervals with problem behaviour (range, 27.7%-61.1%).

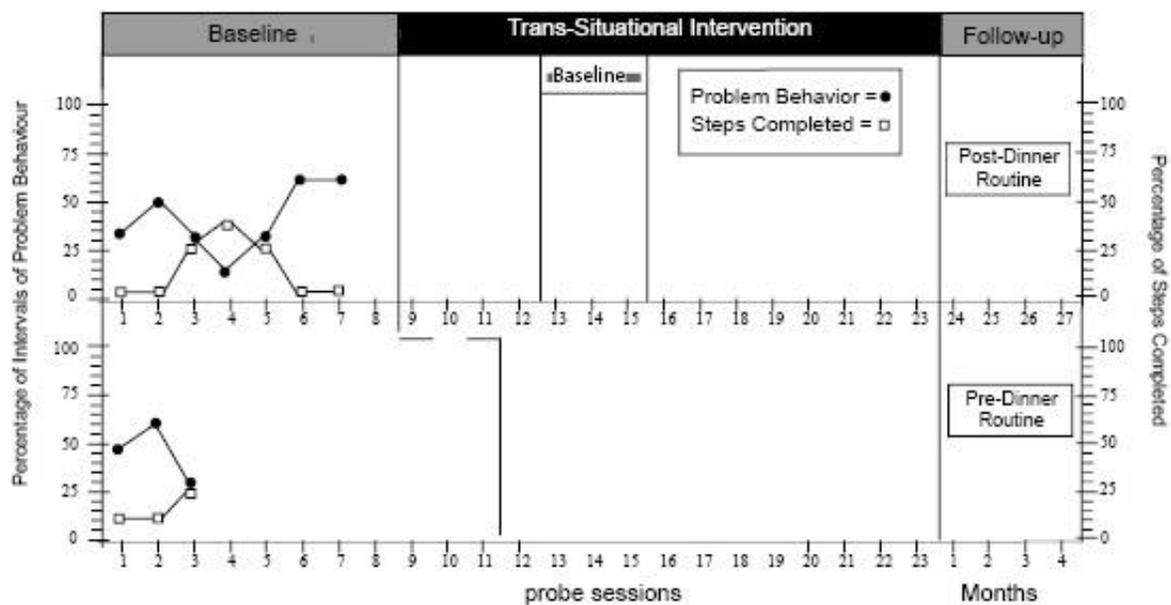


Figure 3.1 Baseline results for percentage of intervals of problem behaviour and percentage of steps completed during the post-dinner group home routine.

Note: Please see left y-axis for percentage of intervals of challenging behaviour and right y-axis for percentage of steps completed.

Percentage of Steps Successfully Completed

Figure 3.1 presents the results for the percentage of steps successfully completed during the baseline phase of the post-dinner routine and pre-dinner routine.

Post-dinner routine. Baseline results showed low and stable levels of steps completed during the post-dinner routine. An average of 12.5% of steps were completed across the three baseline sessions (range, 0-37.5%)

Pre-dinner routine. Baseline results showed low and somewhat variable levels steps completed for the pre-dinner routine. An average of 16.7% of steps were completed across the three baseline sessions (range, 12.5%-25.0%).

Latency in Minutes

Figure 3.2 presents results for latency in minutes to termination or successful completion of target routines during the baseline phase of the post-dinner routine and pre-dinner routine.

Post-dinner routine. Baseline results for latency to termination or successful completion of the post-dinner routine show low, stable levels across the seven baseline sessions. Five of seven baseline sessions were terminated at the 3 minute cut-off point due to Michael engaging in the criterion level of problem behaviour before three minutes had elapsed. Of the seven sessions, 0% were completed successfully due to Michael's challenging behaviour. The average latency to termination for the post-dinner routine during the baseline phase was 3 minutes, 44 seconds (range, 47 sec-14 min, 22 sec)

Pre-dinner routine. Baseline results for latency to termination or successful completion of the pre-dinner routine show low, stable levels across the three baseline sessions. All three baseline sessions were terminated at the 3 minute cut-off point due to Michael engaging in the criterion level of problem behaviour before the three minutes had elapsed. Of the three sessions,

0% were completed successfully due to Michael's problem behaviour. The average latency to termination for the pre-dinner routine during the baseline phase was 1 minute, 40 seconds (range, 50 sec –2 min, 30 sec).

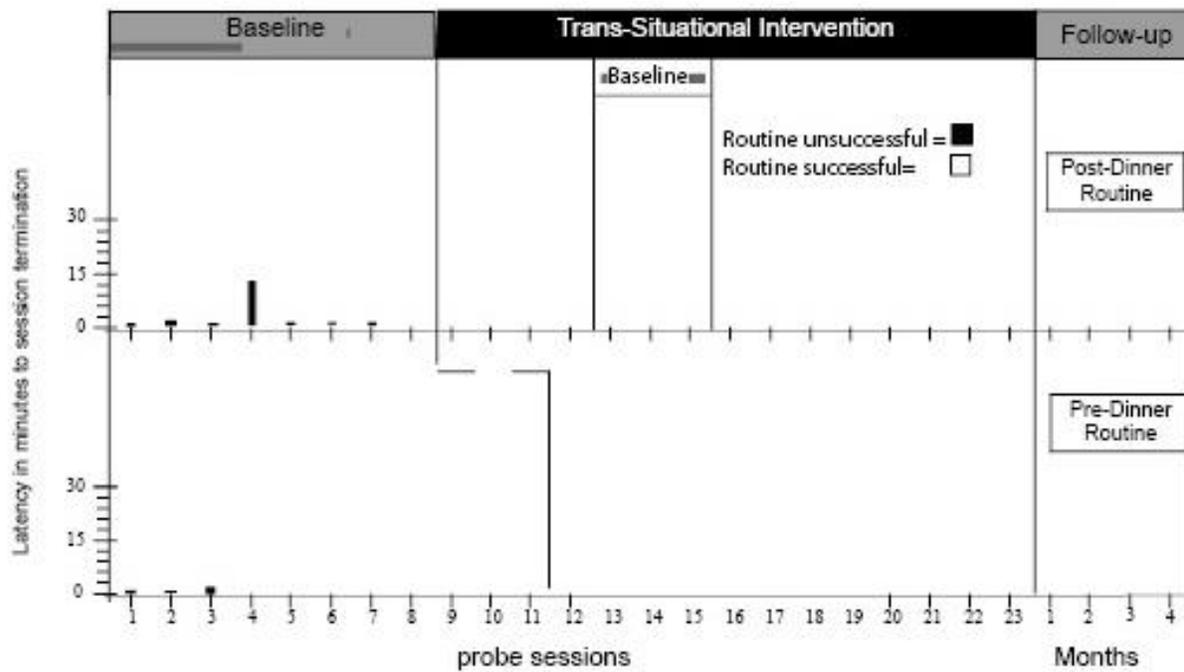


Figure 3.2: Baseline results for latency to termination or successful completion in the post-dinner and pre-dinner routines

Contextual fit

Post-dinner routine. The primary interventionist in the group home, Siobhan completed an evaluation of the contextual fit of the support plan for the group home post-dinner routine. Siobhan completed the evaluation shortly after the plan was finalized. The average rating of contextual fit reported by Siobhan was 4.73 (1= little contextual fit; 5= a lot of contextual fit), indicating a high level of contextual fit.

Chapter 4. Discussion

This study investigated four research questions: (a) is there a functional relation between the implementation of a trans-situational PBS intervention and improvements in problem behaviour and successful target routine participation for an adult with autism across group home and family home settings; (b) how do participating group home staff and family members rate the social validity of the trans-situational PBS approach; (c) how do participating group home staff and family members rate the contextual fit of the behaviour support plan with the target routines and the overall ecology of the group home and family? These questions are responded to below.

Summary and Interpretation of Results

With regards to the first research question, only baseline data were collected across the three dependent variables (i.e., problem behaviour, steps successfully completed, and latency to termination or successful completion). In the post-dinner routine, Michael engaged in moderate levels of challenging behaviours ($M = 42.0\%$) and successfully completed few, if any, steps in the routine ($M = 12.5\%$). In the pre-dinner routine, Michael engaged in moderate levels of challenging behaviour ($M = 44.0\%$) and successfully completed few, if any, steps in the routine ($M = 16.7\%$). Because experimental observational data were not gathered during the intervention phase, no functional effect was documented and this research question remains unanswered.

The second research question examined whether the trans-situational PBS approach is socially valid from the perspective of the group home staff and the parents of their adult son. Because the social validity assessment has not yet been completed, this research question remains unanswered.

The third research question examined whether the trans-situational PBS approach can generate behaviour support plans that are viewed by group home staff and the adult son's family as possessing a good contextual fit with their respective ecologies. The group home staff completed one evaluation of the contextual fit of the support plan for the post-dinner routine. The results of the contextual fit evaluation suggested that Siobhan believed that the support plan had good contextual fit with the ecology of the group home ($M=4.73$). Because, the contextual fit assessment was not completed with Michael's parents for the pre-dinner routine, it is not yet known whether the trans-situational PBS approach can generate a trans-situational PBS plan for the family that is viewed as having a good fit with the family's ecology.

Findings in Relation to the Literature

The study extends several findings in the literature: (a) the activity setting as a unit of analysis; (b) importance of collaboration in the design of behaviour support; and (c) serendipitous effects during preliminary screening of envisioned routines

Activity setting as unit of analysis and intervention. Researchers have long asserted the value of the family activity setting as a unit of analysis for understanding the ecological and cultural factors that contribute to the development and maintenance of problem behaviour, and for building technically sound and contextually appropriate behaviour support plans in natural family contexts that are likely to be effective, acceptable, sustainable, and durable (Lucyshyn & Albin, 1993; Lucyshyn et al., 2007; Moes & Frea 2000). This study adds to this literature by providing the first example of the viability of using the activity setting construct in a group home setting with group home staff to generate a vision of a successful group home routine.

Importance of collaboration in the design of behaviour support. In this study, a multi-component PBS plan was designed in collaboration with group home staff. The primary group

home staff person who participated in the functional assessment and PBS plan design process viewed the plan as contextually appropriate in the group home setting. This preliminary outcome adds modest support to the literature on the importance of collaboration in the design of function-based PBS plans with natural agents in natural settings, in this instance a staff person in a group home setting (Feldman, Condillac, Tough, Hunt, Griffith, 2002; Lucyshyn, Olson, & Horner, 1995).

Serendipitous effects during preliminary screening of envisioned routines. B.F.

Skinner famously defined serendipity as “the art of finding one thing while looking for something else” (Catania, 2004, p. 71). I believe that I caught a glimpse of this form of serendipity during the preliminary screening process with Family 1. In dialogue with thesis committee members, this experience evoked insights into the confluence of variables that produced these highly unexpected results; that is, Family 1’s unexpected success in three consecutively envisioned and piloted routines in the community or at home. The family and I collaboratively designed visions of three routines that were of value to the family but unsuccessful due to their son’s problem behaviour (i.e., going for a walk routine; going to a baseball game routine; and bicycle maintenance routine). Prior to conducting pilot observations in two of the three routines, the family reported that during activities Michael engaged in before 5:00 pm, he insisted on bringing his mountain bike. Due to fear that refusal might result in aggression or other severe problem behaviour, the family typically acquiesced and allowed him to do so. However, through the collaborative process of envisioning a valued routine that Michael and his parent(s) would participate in together, I believe that the family was empowered to approach this situation differently. The activity setting as a unit of assessment and intervention may have activated in Michael’s parents the latent social constructivist ability of parents to build

successful routines for their children (Gallimore, Goldenberg, & Weisner, 1993). Similar to results reported by Lucyshyn et al. (2014) with 10 families of children with developmental disabilities and severe problem behaviour, the act of the family defining their vision of successful activity settings that they valued and being given the opportunity to activate this vision may have generated a strong motivation in the parents to try and to succeed in making the routine work. When the family attempted the going for a walk routine without the bicycle, Michael eventually complied to his parents prompts to join them and the routine was a success. This was repeated two more times and both were equally successful. Now even more empowered by their success in the going for a walk routine, the family then tried a second routine, going to a baseball game in Vancouver without the mountain bike, this time without me present. They were again successful. Lastly, the family envisioned a bicycle maintenance routine, which they were confident would fail as it involved his mountain bicycle. From the family's perspective, any attempt to do something different with the bicycle would surely fail. To the family's surprise, this third routine also was completed successfully. Hypotheses about why this occurred may be found in the concepts of coercive family process, weakened stimulus control, and extinction.

During the pre-screening telephone questionnaire, the father and I spoke about home visit routines that they no longer engaged in due to his son's problem behaviour. The father recalled a few activities that they engaged in together when Michael was a child (e.g., going to hockey games), and spoke of his desire to do such activities again. The father also indicated that he and his wife were fearful of suggesting these activities as historically they led to problem behaviour. The family indicated that this was a pattern of interaction with their son going back over 15 years. The family described a pattern of interaction with four parts:

1. Parent requests son to engage in activity

2. Son engages in precursor behaviour
3. Parent withdraws request to prevent more severe behaviour
4. Son stops engaging in precursor behaviour

This interaction suggests that a coercive family process may have been operating between Michael and his parents (Reid, Patterson, & Snyder, 2002). A coercive family process is an aversive, escape-conditioning sequence of interaction comprised of four steps: (a) parent makes a demand; (b) child engages in problem behaviour; (c) parent withdraws the demand; and (d) child terminates problem behaviour. As noted by Lucyshyn et al. (2009), “Both the parent and child are unaware of the consequences of their own behaviour, and thus become trapped in a relationship that reciprocally maintains child problem behaviour and ineffective parenting practices” (p. 77). Dumas (2005) noted that parents and their children may have such a long history of coercive exchanges that they become automatic and highly resistant to change. However, in this family it appeared that the coercive process may have weakened over time. This thinning of the coercive process may be explained in terms of stimulus control, the ability of a stimulus to occasion a response based on the history of reinforcement for that response. When the child was young and living with the family, requests to engage in family-oriented activities likely acted as a discriminative stimulus (S^D) for escape-motivated problem behaviour. The request signaled to young Michael that engaging in problem behaviour would result in reinforcement in the form escape from the demand. When the child turned 19 (he is now almost 30 years old) he moved into a group home and only visited his family every other weekend. These environmental changes (i.e., moving away and seeing his family less) certainly decreased the frequency of this stimulus-response contingency and over time may have resulted in a

weakened level of stimulus control. However, the parents would not have been aware of this effect and thus still be trapped in the past effects of the coercive process.

One of the guidelines when conducting a pilot observation was to have the session run a minimum of three minutes. In order for pilot observation sessions to last three minutes, the family had to place more than one demand on their son should he not comply with the initial demand. In the past, the family would not have placed more than one demand on their son for fear of provoking problem behaviour. However, within the pilot observation session, we had established termination criteria for the envisioned routine and a safety plan in the event of high intensity problem behaviour. With these measures in place and my presence during the pilot observations, I believe the family was emboldened to try an activity that they had not attempted for close to 15 years. During the pilot observation session, after the family placed their first demand on their son to engage in the walking in the community routine, Michael responded just as they had expected. He engaged in low intensity whining that predicted more intense behaviour if they persisted. The family, however, empowered by their vision of a successful routine in the context of a relatively safe environment, repeated the demand. Their son countered, "I want to watch the weather on TV". The family, still empowered, followed up with an advanced warning: "You can watch the weather and then we'll go for a walk without your bike". The son responded: "OK". A few minutes later he left his room and he and his parents successfully completed the routine exactly as they envisioned it. Given the motivation generated by the parents' envisioned activity setting (i.e., going for a walk), the attenuating effects of time on the stimulus control of a coercive exchange that hadn't been activated for years, and the safety of a controlled pilot observation setting, the family without knowing it implemented a functional escape extinction

procedure that to all of our surprise led to their son's successful participation in the first envisioned routine.

Implications

Because the study was not completed, it offers few implications for practitioners supporting adults with autism in group home settings and for parents who wish to spend quality time with their adult children who live in group homes. However, based on the results of the study to date, it offers four implications for practice: (a) the activity setting as unit of assessment and intervention to promote behaviour change; (b) the activity setting as context for planned design; (c) person-centred planning as a method to bring together staff and families; and (d) the TSI PBS plan as a vehicle for group home staff to support families.

The activity setting as unit of assessment and intervention. The activity setting as unit of assessment and intervention may for some families serve as a powerful context for promoting behaviour change between parents and their adult children in natural family setting. A common theme in my experience with families of adults with developmental disabilities is the belief that no improvements can be made in the quality or quantity of their family visits. The collaborative process of envisioning a successful routine may have a strong impact in moving changing their perceptions of what's possible for their children. This was observed anecdotally with the first family that was screened for study participation. Ironically, an envisioned activity setting alone, for at least some families, may serve as a sufficient catalyst for parents to try to make the routine work without additional support other than staff monitoring to ensure safety. Under these conditions, at least a few families may find the envisioned routine paired with staff support for trying to be a necessary and sufficient condition for success.

The activity setting as context for plan design. The activity setting as a construct offers group home staff and the parents of adult children an opportunity to find common ground on individual service plan goals to work toward achieving on a yearly basis. During yearly planning meetings, group home parents and staff may find activity settings in the home or community that they both value, and wish to improve or build into the life of the adult resident. Activity settings that are mutually agreed upon for intervention and support may create a common focal point for improving quality of life in both the group home and family home settings. A common statement I have received from both family and group home staff is that each side wants to see the group home resident experience an improvement in his or her quality of life. However, the family and staff often have different opinions and perceptions on how to achieve these positive quality of life outcomes. As seen with Michael's family and group home staff, the activity setting can take into account these opinions and perceptions, and in doing so identify a mutually agreeable starting point to work together towards achieving positive outcomes for the resident.

Person-centred planning as a method to bring together staff and families. My experience conducting the persons-centred planning meeting at the start of intervention phase offered anecdotal evidence that person-centred planning can be an effective vehicle for bringing group home staff and families together to collaboratively plan for improving an adult resident's quality of life from a strengths perspective. As experienced in this study by Michael's parents and group home staff, this common effort can forge a new relationship between staff and families. Person-centred planning and positive behaviour support planning are two of the most utilized processes in agencies serving adults with developmental disabilities. Though these two areas are highly compatible and share many common characteristics they are rarely used in

tandem. Combing these two processes into one is likely to have many positive effects in the community living sector.

TSI pbs plan as a vehicle for group home staff to support families. During the trans-situational PBS plan design process, group home staff worked in collaboration with a behaviour consultant and the parents of an adult resident to strategically select an activity setting for intervention that was valued by the group home and family home. They then designed a TSI-PBS plan that would first be implemented in the group home before being introduced to the family home. Such an intervention process in which group home staff clearly engage in professional actions that are client and family centered, and that aim to benefit the family in a manner that maximizes support while minimizing effort, holds much promise for transforming the relationship between group home staff and the families of adult children that reside in group homes. In my experiences working in group home settings, there has often been a gap between supporting families and supporting persons in care, and it is typically the residents who receive most of the supports and resources. Given what has been completed within the intervention phase so far, I see the potential for the TSI-PBS process to reconnect families and persons in care, decrease the need for staffing supports, increase the quantity and quality of family visits, and improve overall quality of life for all involved.

Limitations and Caution

Four limitations and one caution need to be considered when interpreting the results. These are: (a) a lack of experimental results; (b) the use of a multi-component intervention package; (c) limited external validity; (d) incomplete inter-observer agreement; and (e) narrow inclusion criteria in adult community living settings.

Lack of experimental results. Due to time constraints, baseline phase data were gathered but intervention phase data are yet to be gathered. As a result, no statements can be made about the effectiveness of the TSI-PBS intervention.

Use of a multi-component intervention package. The study used a multi-component intervention package, composed of multiple setting event, antecedent, teaching, and consequence strategies. If the intervention is successful upon completion of the study, the research design employed will not permit a determination of the specific component(s) of the intervention that contributed to positive outcomes.

Limited external validity. The participants in this study included one adult with a diagnosis of ASD, one group home staff, and one family. If the intervention is successful upon completion, the inclusion of only one adult with a specific set of characteristics, one group home staff and one family limits the ability to generalize the effects to other participants with different characteristics, with different behaviours, and in different settings. The study will have intervened in only one group home and one family home routine, limiting the ability to generalize to other settings in and outside of either the group home or family home. Further research in this area with additional participants with varying characteristics, as well as different settings and target behaviours will be necessary to establish external validity.

Incomplete interobserver agreement. Due to time constraints, IOA was not conducted for observations in the pre-dinner routine. As a result, no statements can be made about the reliability of the data in the pre-dinner routine.

Narrow inclusion criteria in adult community living settings. The narrow inclusion criteria used to recruit participants for the study may not be an efficient use of time. Over three months were required to recruit two participants for screening. Specifically, the inclusion criteria

of a diagnosis of autism spectrum disorder may have slowed the process and limited access to other suitable participants. The agency from which participants were recruited was the largest agency serving adults with developmental disabilities in the province, serving over 1000 persons and operating approximately 30 group homes. From that population, the families of five adult men with autism were provided with letters of initial contact and three of the five families declined participation in the study. If the criteria had been opened to adults with a wider range of developmental disabilities, the time required to recruit participants for the study would likely have been reduced.

Future Research

If the outcomes of this study are successful upon completion, future research would be necessary in three areas. First, future research should involve systematic replication and extension of results with additional participants with varying diagnoses (e.g., Down syndrome, global developmental delay, Prader-Wili Syndrome), settings (e.g., day programs, community setting, extended family homes), and target behaviours (e.g., safety skills, life skills). Second, there is little data from Canada on the quantity and quality of family visits for adults living in group homes. Future survey research is needed in this area. Lastly future research should involve expanding recruitment to include multiple agencies.

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Appendices

Appendix A

FUNCTIONAL ASSESSMENT INTERVIEW (FAI)

Person of concern	Age	Sex
Date of interview	Interviewer	
Respondents		

A. DESCRIBE THE BEHAVIORS.

1. For each of the behaviours 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 behaviours are when they occur).

	Behaviour	Topography	Frequency	Duration	Intensity
a.					
b.					
c.					
d.					
e.					
f.					
g.					

1. Which of the behaviours 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?

B. 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 behaviour?
2. What medical or physical conditions (if any) does the person experience that may affect his or her behaviour (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 behaviour.
4. Describe the eating routines and diet of the person and the extent to which these may affect his or her behaviour.
- 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>	
•	•	6:00	•	•	2:00
•	•	7:00	•	•	3:00
•	•	8:00	•	•	4:00
•	•	9:00	•	•	5:00
•	•	10:00	•	•	6:00
•	•	11:00	•	•	7:00
•	•	12:00	•	•	8:00
•	•	1:00	•	•	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 behaviours?

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 behaviours most and least likely to happen?

Most likely:

Least likely:

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

Most likely:

Least likely:

3. *People:*

Most likely:

Least likely:

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

Most likely:

Least likely:

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

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

7. Briefly describe how the person's behaviour 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).

Protest or reject a situation or activity																				
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

1. 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?

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

1. *Food items:*
2. *Toys and objects:*
3. *Activities at home:*

4. *Activities at school or in the community:*
5. Other: Going out for meals, visiting his parents.

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>Behaviour</i>	<i>How long has this been a problem?</i>	<i>Programs</i>	<i>Effects</i>
1.				
2.				
3.				
4.				
5.				
6.				
7.				

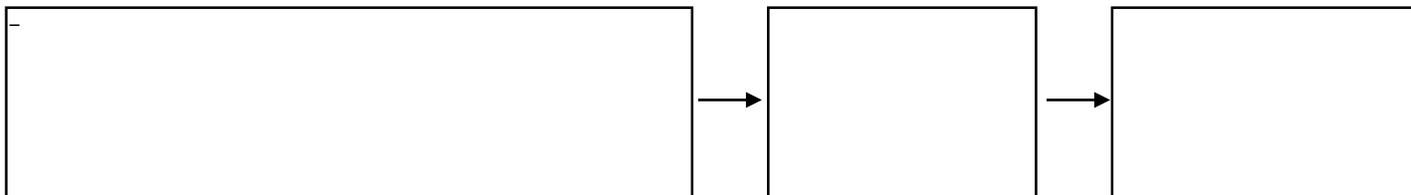
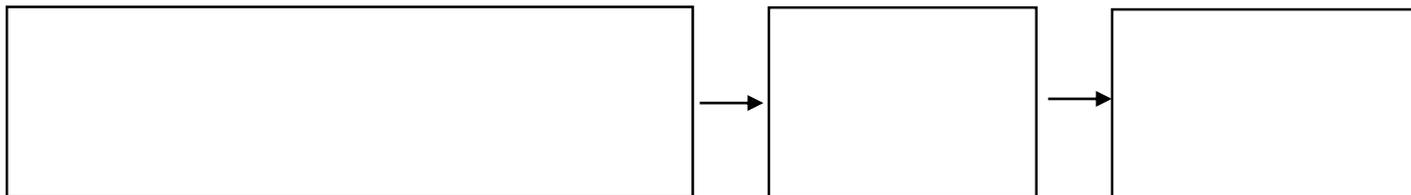
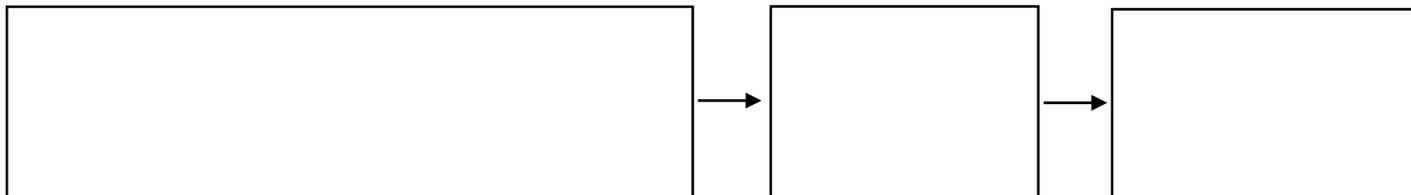
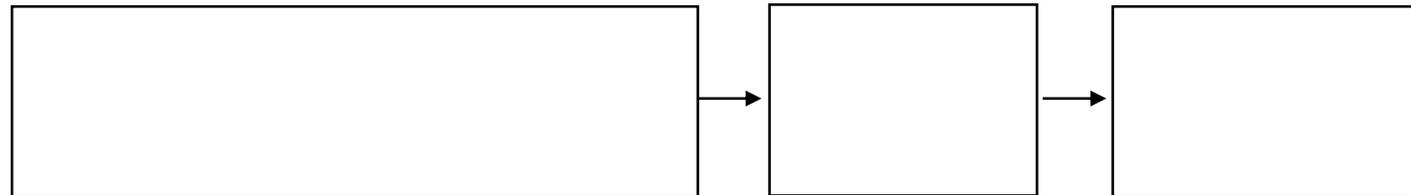
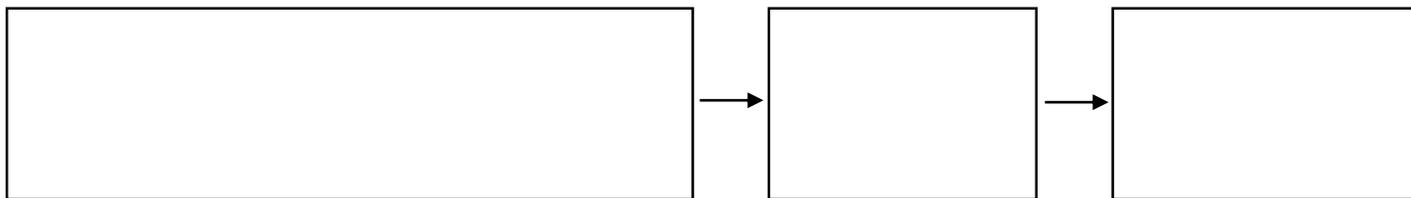
DEVELOP SUMMARY STATEMENTS FOR EACH MAJOR PREDICTOR AND/OR CONSEQUENCE.

Distant Settting Event

*Immediate Antecedent
(Predictor)*

Problem Behaviour

*Maintaining
Consequence*



Appendix B

Family Routine Assessment

Identifying and Defining Activity Settings

Family:

Date:

A. Description of Behaviour

Behaviour	Topography	Frequency	Duration	Intensity
-----------	------------	-----------	----------	-----------

1.

2.

3.

4.

5.

\

Predictors

1. Time of day (When)

2. Setting (Where)

3. People (With whom)

4. Activity (What activity)

Possible Functions of Behavior

Behaviour	What does s/he get?	What does s/he avoid?
1.		
2.		
3.		
4.		
5.		

6.		

D. Focus adult's typical schedule of daily activities (home routines and community activities)

Time of Day	Weekday	Weekend
Morning		
Mid day		

Afternoon		
Evening		

E. Home routines in which problem behaviours typically occur and your priorities for improvement.

F. Community activities in which problem behaviours typically occur and your priorities for improvement.

G. Home or community routines that you have significantly altered or no longer do because of problem behaviour, and your priorities for improvement.

Appendix C

Social Validity Questionnaire for Group Home

Date: _____

Group home staff completing evaluation: _____

		Disagree			Agree	
1.	The goals of the treatment plan are appropriate for the focus adult.	1	2	3	4	5
2.	The goals of the plan are consistent with this group home's goals, values, and beliefs.	1	2	3	4	5
3.	The strategies and procedures used are difficult to carry out.	1	2	3	4	5
4.	The strategies and procedures are effective in improving the focus adult's behaviour.	1	2	3	4	5
5.	The outcomes of the treatment effort are beneficial for the focus adult.	1	2	3	4	5
6.	The outcomes of the treatment effort are beneficial to the group home as a whole.	1	2	3	4	5
7.	The treatment effort has caused some unanticipated problems in our group home.	1	2	3	4	5
8.	Training activities have been well organized, clear, and helpful.	1	2	3	4	5
9.	The person(s) providing technical assistance has shown respect for our team's values and beliefs.	1	2	3	4	5
10.	I am confident in my ability to implement, with the focus adult, the behaviour support strategies in his or her support plan for one year or more.	1	2	3	4	5
11.	Overall, this treatment effort has strengthened our team.	1	2	3	4	5

Appendix D

Social Validity Questionnaire for Families

Date: _____

Family member completing evaluation: _____

		Disagree			Agree	
		1	2	3	4	5
1.	The goals of the treatment plan are appropriate for my son or daughter.	1	2	3	4	5
2.	The goals of the plan are consistent with my family's goals, values, and beliefs.	1	2	3	4	5
3.	The strategies and procedures used are difficult to carry out.	1	2	3	4	5
4.	The strategies and procedures are effective in improving my child behaviour.	1	2	3	4	5
5.	The outcomes of the treatment effort are beneficial for my son or daughter.	1	2	3	4	5
6.	The outcomes of the treatment effort are beneficial to my family as a whole.	1	2	3	4	5
7.	The treatment effort has caused some unanticipated problems in our family.	1	2	3	4	5
8.	Training activities have been well organized, clear, and helpful.	1	2	3	4	5
9.	The person(s) providing technical assistance has shown respect for our family's values and beliefs.	1	2	3	4	5
10.	I am confident in my ability to implement, with the focus adult, the behaviour support strategies in his or her support plan for one year or more.	1	2	3	4	5
11.	Overall, this treatment effort has strengthened our family.	1	2	3	4	5

Appendix E

Contextual Fit Survey (Group Home)

Name of family:

Group Home Staff completing checklist:

Date:

Introduction: This survey is for use by group home staff working with consultants to improve the behaviour and lifestyle of their persons-served. This survey is based on experience that the success of a support plan depends a great deal on whether the plan fits with the values and lifestyle of your group home. Your responses will help us a) improve the quality of the plan, and b) understand better how to build support plans that are most helpful. Below are 19 questions about the plan and its prospects for success. Please answer each question by rating the number that most closely matches your current view. The rates read: 1) not at all, 2) not much, 3) can't tell, 4) well (or much), and 5) very well (or very much).

		Not at all	Not much	Can't tell	Well (much)	Very well (very much)
1.	Do you believe the support team understands the needs the person-served has for support across the hours of each day and in each important setting in which he or she participates?	1	2	3	4	5
2.	Do you believe the plan takes into account your understanding of the person-served (e.g., reasons for problem behaviors, strategies that promote positive behaviour, person-served preferences)?	1	2	3	4	5
3.	Does the plan really address your highest priority goals for the person-served?	1	2	3	4	5
4.	Do you understand what you are expected to do as part of this plan?	1	2	3	4	5

5.	Are you comfortable with what you are expected to do?	1	2	3	4	5
6.	Do you understand what others (e.g., consultant, group home staff, other family members) are expected to do as part of this plan?	1	2	3	4	5
7.	Are you comfortable with what others are expected to do?	1	2	3	4	5
8.	Does the plan recognize and support your needs as a member of the group home staff team?	1	2	3	4	5

		Not at all	Not much	Can't tell	Well (much)	Very well (very much)
9.	Does the plan recognize and support the needs of other persons-served and staff at the group home .	1	2	3	4	5
10.	Overall, does the plan fit with your values and beliefs about supporting an adult with a disability and creating a meaningful life together?	1	2	3	4	5
11.	Does the plan include successful strategies you have used during group home routines in the home or community?	1	2	3	4	5
12..	Will the plan, in the long run, disrupt group home routines in the home or community to point that stress and hardship will be created?	1	2	3	4	5
13.	Does the plan recognize and build on your team's strengths?	1	2	3	4	5
14.	Does the plan recognize and build on positive contributions the person-served has made to the group home?	1	2	3	4	5
15.	Does the plan make use of resources (e.g., help from staff, family, other PosAbilities services) available to you, your staff team, and other residents?	1	2	3	4	5

16.	Does the plan include needs you may have for long-term social-emotional support (e.g., someone with whom you do enjoyable activities)?	1	2	3	4	5
17.	Do you believe the support plan will be effective?	1	2	3	4	5
18.	All things considered, how difficult will it be for you to use this support plan (e.g., time involved, coordination, tasks)	1	2	3	4	5
19.	If the plan is effective do you believe you can keep using the support strategies for a long time (e.g., over 1 year) even though other members of the support team will not be available as much (e.g., little to no contact from the consultant, consultative assistance by telephone, less contact with group home staff)?	1	2	3	4	5

Appendix F

Contextual Fit Survey – Family

Name of family:

Family member(s) completing checklist:

Date:

Introduction: This survey is for use by families working with consultants to improve the behaviour and lifestyle of their son or daughter. This survey is based on experience that the success of a support plan depends a great deal on whether the plan fits with the values and lifestyle of your family. Your responses will help us a) improve the quality of the plan, and b) understand better how to build support plans that are most helpful. Below are 19 questions about the plan and its prospects for success. Please answer each question by rating the number that most closely matches your current view. The rates read: 1) not at all, 2) not much, 3) can't tell, 4) well (or much), and 5) very well (or very much).

		Not at all	Not much	Can't tell	Well (much)	Very well (very much)
1.	Do you believe the support team understands the needs your son or daughter has for support across the hours of each day and in each important setting in which he or she participates?	1	2	3	4	5
2.	Do you believe the plan takes into account your understanding of your child (e.g., reasons for problem behaviors, strategies that promote positive behaviour, child preferences)?	1	2	3	4	5
3.	Does the plan really address your highest priority goals for you son or daughter and family?	1	2	3	4	5
4.	Do you understand what you are expected to do as part of this plan?	1	2	3	4	5
5.	Are you comfortable with what you are expected to do?	1	2	3	4	5
6.	Do you understand what others (e.g., consultant, group home staff, other family members) are expected to do as part of this plan?	1	2	3	4	5
7.	Are you comfortable with what others are expected to do?	1	2	3	4	5

8.	Does the plan recognize and support your needs as a mother or father?	1	2	3	4	5
9.	Does the plan recognize and support the needs of other family members living at home (e.g., other children, grandparents)	1	2	3	4	5
10.	Overall, does the plan fit with your values and beliefs about raising a child with a disability and creating a meaningful family life together?	1	2	3	4	5
11.	Does the plan include successful strategies you have used during family routines in the home or community?	1	2	3	4	5
12..	Will the plan, in the long run, disrupt family routines in the home or community to point that stress and hardship will be created?	5	4	3	2	1
13.	Does the plan recognize and build on your family's strengths?	1	2	3	4	5
14.	Does the plan recognize and build on positive contributions your child has made to the family?	1	2	3	4	5
15.	Does the plan make use of resources (e.g., help from spouse, respite care, parent support group) available to you and your family?	1	2	3	4	5
16.	Does the plan include needs you may have for long-term social-emotional support (e.g., someone with whom you do enjoyable activities)?	1	2	3	4	5
17.	All things considered, how difficult will it be for you to use this support plan (e.g., time involved, coordination, tasks)	5	4	3	2	1
18.	Do you believe the support plan will be effective?	1	2	3	4	5
19.	If the plan is effective do you believe you can keep using the support strategies for a long time (e.g., over 1 year) even though other members of the support team will not be available as much (e.g., little to no contact from the consultant, consultative assistance by telephone, less contact with group home staff)?	1	2	3	4	5