

The Family Game: A Parent Education Intervention to Increase Positive Parent-Child
Interactions in Parents with Learning Difficulties

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Abstract

Children of parents with learning difficulties (LD) are at risk for a variety of developmental problems including behavioural and psychiatric disorders. However, there are no empirically supported programs to prevent behavioural and psychiatric problems in these children. The purpose of the study was to test the effectiveness of a parenting intervention designed to teach parents with learning difficulties positive child behaviour management strategies. A multiple baseline across skills design was used with two parents, who were taught three skills: 1) clear instructions, 2) recognition of compliance and 3) correction of noncompliance. Training scores improved on each skill and maintained at a 1-month follow-up. Scores on generalization cards were high and showed maintenance, but improvements in parenting skills in the naturalistic environment were low at posttest and follow-up. Increases were seen in child compliance at posttest and 1-month follow-up. Results of pre-post social validity measures were also generally positive.

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The Family Game: A Parent Education Intervention to Increase Positive Parent-Child Interactions in Parents with Learning Difficulties

Purpose of the Study

The purpose of the current study was to evaluate the efficacy of a parent training program entitled "The Family Game" designed for parents with learning difficulties and their children (aged 2 to 10 years) who are at risk of behavioural and psychiatric problems. The Family Game is used here to teach noncorporal child behaviour management strategies to increase positive parent-child interactions and improve child compliance. Although child compliance and child cooperation are terms often used interchangeably (e.g., Strand, 2004; Ducharme & Drain, 2004; Strain, Steele, Ellis, & Timm, 1982), it is important to make a distinction between the two. The former refers to the child initiating a response to a parental instruction (i.e., telling child to complete a specific action), while the latter means initiating a response to a parental request (giving child the choice of completing a certain action). The present study specifically aimed to increase child compliance to parental instructions in many basic daily home routines.

Introduction

Individuals with learning difficulties (LD)¹ have become increasingly conscious of their right to become parents and to build a family. There have been changes in international law regarding the rights of persons with disabilities, particularly their right to marry and have children (United Nations, 2006) and the number of individuals with LD exercising their right to parent has increased substantially in the past several years (e.g., Pixa-Kettner, 2008). This has

¹The term learning difficulties refers to intellectual disabilities, cognitive limitations and borderline intellectual disability.

led to a stream of studies to investigate the impact of parenting with learning difficulties on children. Several studies to date have demonstrated that children of parents with learning difficulties are not only at risk of developmental delay, associated with styles of parent-child interaction (e.g., Feldman, Case, Towns, & Betel, 1985; Feldman, Sparks & Case, 1993/2004) but also emotional and behavioural problems (O'Neill, 1986; Feldman & Walton-Allen, 1997/2002).

Although research has repeatedly shown that parenting competency is not directly linked to IQ scores (e.g., Tymchuk & Feldman, 1991), cultural assumptions about individuals with learning difficulties have led to the commonly held myth that persons with low IQ will necessarily be inadequate as parents. Due to these assumptions, parenting assessments are commonly designed on the singular basis of intellectual disability leading to increased involvement of parents with LD in the family court system and frequent discrimination within the system (Booth, Booth & McConnell, 2005; McConnell, Feldman, Aunos, & Prasad, 2011). Recently, emphasis has been placed on the use of comprehensive parenting assessments to evaluate parenting capacity in the context of other variables that contribute to increased stress and pressure on parents and are related to the use of ineffective disciplinary strategies (Feldman & Aunos, 2010).

Conceptual Framework

In order to explain why more evidence-based interventions are needed for parents with LD, it is important to first understand parenting and child problem behaviour from two theoretical frameworks: social interactional model (Feldman & Aunos, 2010) and coercion theory (Granic & Patterson, 2006; Patterson, 1982). These theoretical perspectives provide a frame of reference not only for understanding why parents with LD often provide ineffective

parenting, but also to conceptualize child problem behaviour as a construct affected by family processes and patterns of behaviour in a family context.

The social interactional framework was developed on the basis of ecological approaches and other child development theories to map pathways of interaction between specifically determined variables that affect parenting (Belsky & Vondra, 1989; Sameroff, Seifer, & McDonough, 2004). Moreover, this model has been adapted specifically for parents with learning difficulties and the common social factors by which they are typically affected (Feldman & Aunos, 2010). This model proposes that parenting is not a “static trait” but rather a variable that changes based on factors such as parental history, parental health, parenting style, social factors, supports and services received by families as well as family and child characteristics. Essentially, these factors interact to provide context for parenting challenges experienced by parents with LD. For example, parents with LD report high levels of stress associated with lack of social support and having a social support network has shown to be positively correlated with providing positive parent-child interactions (Aunos, Feldman, & Goupil, 2008; Feldman, Varghese, Ramsay, & Rajska, 2002).

Patterson (1982) initially proposed a coercion theory to examine aggressive behaviour and antisocial development in children. The basic assumption of this theory is that child aggressive behaviour does not occur independently of the parent’s behaviour, and must therefore be understood as a function of the family process. According to Patterson (1982), the child and the parent shape each other’s behaviours in a way that may lead to increased child problem behaviours in response to parents’ behaviours and less parental control over child problem behaviours. Moreover, aggression constitutes a much larger set of behaviours such as whining, yelling, screaming, not complying with instructions and not cooperating with parental requests.

This model has been expanded to formulate the dynamic systems approach that also incorporates cognitive and psychobiological factors within a larger theoretical framework (Granic & Patterson, 2006). However, the behavioural patterns occurring within the family remain relevant. Most of Patterson's (1982) research has been conducted on parents without LD, albeit with a variety of backgrounds. Nonetheless, the basic framework can be extended to children of parents with LD. That is to say, parents with LD, similar to parents without LD, may inadvertently exacerbate the problem when they use ineffective disciplinary strategies for difficult behaviours. Parents who participated in research by Patterson (1982) indicated that when they used corporal punishment with their children, they felt like “they had no other choice” showing that they were ill-equipped to effectively manage child problem behaviours due to a number of related variables, as mentioned above. The Family Game evaluated in this study was developed on the basis of the social interactional model and coercion theory, particularly the reciprocal relationship between child characteristics and parenting.

Risk of Behaviour Problems

Child problem behaviour remains a public health issue and research has demonstrated the need for parent training programs for parents in general (Patterson, Mockford, Barlow, Pyper & Stewart-Brown, 2002), regardless of parental IQ. A postal survey completed by 800 families revealed that one-fifth of the parents who responded perceived behaviour difficulties with their 2-to-8 year old children; 50% of these parents had attended special training programs and expressed interest in returning to these programs for further help (Patterson et al., 2002). However, results also showed that parents from higher socioeconomic backgrounds had better supports in their lives and were more likely to access parenting programs, compared to parents from more disadvantaged backgrounds, who may have needed more help with parenting (Patterson et al., 2002). Child misbehaviour and children's conduct problems at school have also

shown to be reliably predicted by behaviour problems at home caused by ineffective discipline by parents in the home environment (Snyder, Cramer, & A Frank, 2005). Mantymaa, Puura, Luoma, Vihtonen, Salmelin, and Tamminen (2009) found that there was continuity in children's emotional and behavioural problems from the age of 2 years to 5 years associated with problems in mother-child interactions. In addition, early disruptive behaviours, such as child noncompliance and oppositional behaviour were indicative of future antisocial and aggressive behaviours and conduct problems (Patterson, DeBaryshe, & Ramsey, 1990; Shaw, 2013; Shaw & Bell, 1993). Conduct problems, amongst other variables, in childhood and adolescence are correlated with future criminal involvement (e.g., Lewis, 2010; Schaeffer, Petras, Ialongo, Poduska, & Kellam, 2003).

Risk of Behaviour Problems in Children of Parents with LD

Children of parents with LD may be at higher risk for behavioural maladjustment and psychiatric problems relative to parents without LD (Gillberg & Geijer-Karlsson, 1983). Feldman and Walton-Allen (1997/2002) found that even after controlling for the effects of socioeconomic status (SES), children of parents with LD have increased risk of learning difficulties themselves as well as behaviour disorders, compared to children of parents without LD. Feldman and Walton-Allen (1997/2002) compared groups of mothers with and without learning difficulties but similar SES background and found that children (especially the boys) of mothers with LD had elevated behaviour problems as indicated on the Child Behaviour Checklist (Achenbach, 1988). Behaviour problems were negatively correlated with maternal social support. These findings indicate that parents with LD often find themselves in poor social conditions due to the mediating variable of learning difficulties. The interactions between these variables may be associated with a range of family problems. Research has also identified history of the parent with LD and his or her experience and treatment during childhood as a risk factor

for parenting difficulties (Feldman, 1998; Leifer & Smith, 1990). Many parents with LD have a history of emotional and physical abuse, neglect and victimization (e.g., Booth & Booth, 1997).

Recent studies have placed a greater emphasis on examination of such factors as parental history, family stressors, social support issues, financial problems and other environmental variables, as these may present greater challenges for parents with LD (Aunos et al., 2008; Feldman, McConnell, & Aunos, 2012; McConnell et al., 2011; Mildon, Wade & Matthews, 2008). These factors, as viewed through a social interactional lens, may adversely affect parent-child interactions and lead to child problem behaviours. Aunos et al. (2008) assessed parenting style of parents with LD and found that although parents with LD tend to score higher on measures of hostile and inconsistent parenting style, the relationship between child behaviour problems and parenting style was nonsignificant when maternal stress was controlled. Therefore, the relation between parenting style and child behaviour problems was mediated by parental stress (Aunos et al., 2008).

A follow-up study conducted by O'Neill (2011) led to further evidence that children with LD are at high risk of developing a variety of mental health issues and behaviour problems. Although the study was carried out on a small sample size ($N = 23$), a high prevalence of psychological disorders such as major depression in grown children of parents with LD as well as conduct disorders during adolescence were reported. O'Neill (2011) indicated that many of the parents in the original study (O'Neill, 1986) were those who had either been institutionalized or lived in group residences while growing up and therefore had limited opportunity to learn how to run a family home. Overall, social support, evidence-based services and financial resources have consistently been found to be variables that relate to parenting success in parents with LD (Feldman et al., 2012; Feldman & Walton-Allen, 1997/2002; McConnell et al., 2011; O'Neill, 2011).

Parent Education Interventions

Overview

Two decades ago, there was a steady increase in research focused in the area of educational programs and interventions for parents with learning difficulties (Feldman, 1994), but research in this area has since slowed down and few intervention studies have been conducted recently (Wade, Llewellyn, & Matthews, 2008). Several studies have been conducted to evaluate the effectiveness of training programs to teach parents a range of skills, such as basic childcare, home safety, problem-solving skills and parent-child interactions (Feldman, 1994). To date, two literature reviews have been published on outcomes of various parent intervention studies over the past 30 years. Feldman (1994) conducted a review of 20 outcome studies with reliable data on the success of educational programs implemented with various populations of parents with LD. Although many of the studies employed single-case designs or group studies with relatively small sample sizes, the results were deemed generally positive.

Some studies reviewed by Feldman (1994) utilized a between-groups study design and showed that parenting interventions for parents with LD led to significant improvement when compared to control groups (e.g., Feldman, Case & Sparks, 1992; Feldman, Sparks & Case, 1993). Skill-based behavioural training techniques were consistently found to be successful in teaching parents with LD a variety of skills needed to care for preschool-aged or younger children, such as childcare tasks, home safety training and interaction during playtime. These studies involved observational measures of childcare skills, parent-child interactions, and some child outcomes such as child language and behaviour (e.g., Feldman et al., 1993; Tymchuk & Andron, 1988; 1992). Behavioural techniques used for teaching parents consisted of simple verbal instructions, task analysis, modeling, audio-visual aids, regular practice, positive and corrective feedback, and reinforcement strategies (Feldman, 1998; 2010). However, Feldman

(1994) highlighted the paucity of child outcome data and need for development and evaluation of training programs for parents with LD to manage problem behaviours of children over the age of 2 years. Moreover, social validity measures (such as consumer satisfaction ratings) were limited and more generalization and maintenance data were needed.

An updated review conducted by Wade et al. (2008) looked at seven new parent training studies published since 1994. Most of the new studies were evaluations of self-instructional parenting manuals designed by Feldman and colleagues (Feldman, 2004a; Feldman & Case, 1993). Their results confirmed that behavioural training programs delivered in the home setting are more effective for parents with learning difficulties rather than centre-based training (e.g., Llewellyn, McConnell, Russo, Mayes, & Honey, 2002; Tymchuk & Andron, 1988). However, Wade et al. (2008) expressed concerns similar to those of Feldman (1994) regarding lack of child outcome data and need for further research on the impact of interventions on family functioning, marital satisfaction, parental self-esteem and child maltreatment. Another important observation made by Wade et al. (2008) was regarding "contextual factors" such as the home environment and child variables, and how they influence the success of any parenting intervention. Another review conducted in an unpublished meta-analysis (Jordan & Feldman, 2009) using percentage of non-overlapping data points showed a moderate effect size for parenting interventions, but generalization of parenting behaviours across skills and settings as well as child outcomes remain questionable.

Improving Parent-Child Interactions in Parents with LD

Although there is still a shortage of treatment research, interventions that have aimed to increase parental problem-solving skills and positive parent-child interactions have shown clinically significant results (Feldman, Case, Rincover, Towns, & Betel, 1989; Feldman et al., 1986; Mildon, et al., 2008; Tymchuk & Andron, 1992) . Previous research on parent-child

interactions has revealed that mothers with LD who have infants and toddlers engage in fewer positive interactions to their children in comparison to mothers without such difficulties, (Feldman et al., 1986; Feldman et al., 1989; Feldman et al., 1993/2004). However, with the use of performance-based training strategies, mothers with LD can be taught to increase the frequency and quality of their interactional skills while playing with their children, to match or surpass mothers without LD (Feldman et al., 1993/2004). Moreover, parental gains have not only shown to generalize from a group setting to the mothers' homes (Feldman et al., 1986) and from playtime to other childcare tasks (Feldman et al. 1989) but also maintained over a period of several months and increased child language, appropriate behaviour and development (Feldman et al., 1993/2004).

The aforementioned studies showed positive results, but a majority of the research was conducted on younger children, including infants, toddlers or preschool aged children. There is a significant gap in parent-child interaction research on older children, particularly research on teaching parents with LD to manage child behaviour problems. Tymchuk and Andron (1988) conducted a study using a multiple baseline across behaviours design with a mother with LD who had three children (aged 1 to 7 years) with developmental delays. Each child exhibited severe behaviour problems in the form of frequent temper tantrums. The mother dealt with her children's behaviour in a highly punitive and critical manner, regardless of whether her children complied with parental requests or not. During the training sessions, she was taught to positively reinforce desirable behaviours and use techniques such as modelling, labelling and asking questions. The main purpose of the training was to teach the mother with LD how to use alternative methods of discipline rather than corporal punishment. The findings were generally positive and gains in parenting skills were maintained over a 1-year follow-up period. However, the authors pointed out that the intervention was considerably labour-intensive. Moreover,

training occurred in a clinic setting as well as at home with the whole family, making it difficult to determine generalization effects.

Aside from Tymchuk and Andron's (1988) study, only one other study on children older than 2 years of age could be found, revealing a serious gap in research on this age group of children of parents with LD. Mildon et al. (2008) conducted a pilot study on an intensive home program for training parents with LD built on three modules, one of them being positive behaviour support (PBS) which was formulated specifically to teach parents when to use noncorporal parenting strategies to increase child appropriate behaviour and decrease problem behaviour. Parents were a major part of the decision-making process in this intervention and played a crucial role in selecting which module parents would be trained in for the proper contextual fit. The age range of children of parents with LD who participated in the study was 2 to 6 years. After the intervention, parents reported a significant decrease in child disruptive behaviour and high consumer satisfaction. Although results were generally positive, intervention effect sizes were not found to be statistically significant due to possible methodological limitations, such as a small sample size and length of the intervention (Mildon et al., 2008). Moreover, there were no direct measures of parent and child behaviours, further revealing the gap in training and generalization data in research on parents with LD who have older children.

Overall, a great majority of intervention studies conducted on parents with LD to date have either focused on parenting skills such as home care and safety, basic childcare tasks and positive interactions during play, or have been carried out with children younger than 3 years old, sometimes only infants. There is a great limitation of research on child behaviour problems and child compliance, particularly for older children of parents with LD.

Rationale for the Present Study

Parents with LD are frequently targeted by child protection agencies and social workers because of perceived child maltreatment (McConnell et al., 2011) and most existing parenting programs do not address specific learning needs of parents with LD. Moreover, despite the risk of behavioural and psychiatric problems in children of parents with LD, there are no evidence-based parenting programs that aim to teach positive child behaviour management strategies to improve child problem behaviour and promote positive parent-child interactions. Parents with LD who have older children have reported increased levels of stress compared to parents with LD who have younger children (Feldman, Léger & Walton-Allen, 1997). Parents with LD may find it more difficult to manage their children as they become more assertive, demanding and noncompliant (Feldman & Walton-Allen, 1997/2002). Moreover, the current body of literature is limited in regard to generalization of parenting skills across different settings, such as from the training setting to the natural home setting.

To fill the current research gap, the present study sought to evaluate the efficacy of a training package named "The Family Game" designed by Dr. Maurice Feldman (2004b). The Family Game utilizes a board game format for teaching parents with LD who have older children positive behaviour support strategies based on applied behaviour analysis. The game format incorporates evidence-based teaching strategies such as modeling, roleplaying, repeated practice and positive and corrective feedback (Feldman, 1994). The primary objective of The Family Game is to increase positive parent-child interactions by improving child correct responses to parental instructions (i.e., compliance). The target in this study was to teach parents with LD to use positive-based, noncorporal disciplinary methods for their older children. In order to assess progress in parental competence, the current study employed evaluation methods such as direct observation, self-report questionnaires on perceived parental adequacy and stress, as well as

naturalistic observations to test for generalization from the game to in-home parent-child interactions.

Previous studies have shown the game format to be an efficient and cost-effective approach to parent education, particularly when delivered in a group setting (e.g., Fantuzzo, Wray, Halls, Goins & Azar, 1986). The Family Game has been implemented by service professionals in parts of the United States, Canada, and Australia and preliminary findings are encouraging. In Australia, three parents with LD made gains in giving clear instructions, praising child compliance and correcting child noncompliance during training, which maintained and generalized to untrained scenarios; however no home observations were made (Mildon, Feldman & Clark, 2004). In Ontario, seven parents demonstrated an increase in giving clear instructions, praise and corrections that generalized to the home; child compliance also increased post training (Feldman, unpublished data). Although the data are promising, it is necessary to test The Family Game in a controlled study.

Feldman's (2004b) original program was revised to include an expanded curriculum for individualized intervention with parents as well as to incorporate various evidence-based methods to promote child compliance, such as using a token economy at home (e.g., Higgins, Williams, & McLaughlin, 2001).

Hypotheses

Parents with learning difficulties who played The Family Game were expected to show improvement in roleplayed performance in three parental skill areas: delivering clear instructions, recognition of appropriate child compliance and correction of child noncompliance. More specifically, it was hypothesized that parents would attain a higher percentage correct on trained and untrained (i.e., generalization) parenting scenarios compared to baseline, as a result of receiving training, for all three skill areas. In addition, parents were expected to show an

increase in positive-based child behaviour management strategies in home observations (i.e., *in-situ* generalization). Parents were also expected to have post-training increases in parental competence scores, lower stress levels and lower perceived child behaviour problems on standardized measures. Moreover, children were also expected to show increases in compliance to parental instructions and reductions in noncompliance and problem behaviours at home as a result of training parents to use more proactive parenting methods.

Method

Participant Characteristics

For the current study, after receiving approval from the Brock University Research Ethics Board, the researchers contacted several community agencies in the Niagara Region and Southwestern Ontario that provide services to parents with LD and their children. To be eligible for the study, the families needed to have children between the ages of 2 and 14 years (regardless of prevailing behaviour problems, other diagnoses, or developmental stage). The parents were also required to meet the criteria for learning difficulties based on any one of the following: (a) eligibility for Ontario Disability Support Program (ODSP) for intellectual disability, (b) parental history of special education, (c) worker or self-report of learning difficulties or (d) previous or recent cognitive testing indicating an $IQ < 80$.

In total, three mothers with LD consented to participate in the study. Anne and Melissa completed all phases of the study, including a 1-month follow-up. The third mother completed the pretest phase of the study and was unable to continue participation thereafter due to scheduling difficulties. Anne was a 42-year-old single mother who was living with her son and daughter, aged 10 years and 20 years, respectively. She was a stay-at-home mother who was receiving ODSP for intellectual disability. Anne received special education services while she was in school and went on to obtain her high school diploma. In the past, Anne's children were

removed from the home by Children's Aid Society (CAS) for short periods of time (when her son was 3 years old). For the purpose of the study, Anne focused on her son as he was in the eligible age range for the study. He had a diagnosis of ADHD and displayed severe oppositional and destructive behaviours. He was on a waitlist for children's mental health services at the time of the study. Anne received some parent training prior to The Family Game program through the Boys and Girls club.

Melissa was a 46-year-old mother of four girls, aged 12 years, 14 years, 16 years and 25 years. For the study, Melissa chose to focus on her 14-year-old daughter who also had learning difficulties and she was diagnosed with ADHD. Melissa was married and living with her husband and two of her daughters (the older ones had moved out); she was receiving ODSP for intellectual disability. Melissa attended a special education class in school up to Grade 11. Melissa had received no parent training prior to The Family Game. During the consent meeting with Melissa, her support worker and the Student Principal Investigator (SPI) invited Melissa's husband to take part in The Family Game sessions. However, Melissa said that he would not be able to participate due to his busy schedule.

Study Design

This study used a multiple baseline across skills design (Hayes, Barlow & Nelson-Gray, 1999). Since The Family Game is designed for sequential skill acquisition and generalization, a multiple baseline design allowed us to determine a functional relation between the intervention and the behaviour change. Moreover, this design also accommodated the unique learning needs of the participants by only introducing one skill area at a time. Several baseline data points were collected on three parental skill areas simultaneously (e.g., giving clear instructions, praising child compliance and correcting child noncompliance) on both the game cards and in-home observations. Then The Family Game training was provided on one skill (i.e., Instructions).

When the parent reached mastery criterion (80% correct answers across 2 consecutive sessions) in one trained skill, the second skill (i.e., Recognition) received training and subsequently the third skill (i.e., Correction), when improvement was seen in the second skill. Training continued on each previous skill when a new skill was introduced. A multiple probe design was employed for measuring generalization across settings and skills. Generalization probes were done in two ways: first, for untrained game scenarios and second, *in-situ* generalization to determine generalization outside of the training context (i.e., in natural parent-child interactions in the home).

Measures

Items on all measures covered below were communicated verbally to the parents in order to avoid any difficulties in understanding what the questions meant.

Demographics questionnaire. A demographics questionnaire about family characteristics (see Appendix E.1) was administered at the beginning of the study, before conducting any pretests or baseline measures. The demographics measure contained questions about the mother's, father's and each of their children's educational history and any special services they previously received, in school or otherwise. This information was important for descriptive purposes for dissemination of the study and aided in contextualizing each family's situation so that The Family Game could be evaluated on a case-by-case basis.

Child Behaviour Management Survey. The Child Behaviour Management Survey (CBMS; Feldman, Hancock, Rielly, Minnes & Cairns, 2000; Feldman & Werner, 2002) (see Appendix E.2) was used as an evaluation tool (pre- and post-training tests) as well as for The Family Game curriculum development. The CBMS was utilized to identify significant behaviour problems in the participants' children, measure parental self-efficacy and identify types of behaviour management strategies participants used. The measure consists of three sections: 1)

Rating Child Problem Behaviour, 2) Parent Self-Efficacy of Child Behaviour Management Strategies, and 3) Types of Behaviour Management Strategies.

Section 1 includes 42 items measured on a Likert scale (1=never a problem; 7=always a problem), with definitions of various problem behaviours. Any score of 5 or above in Section 1 was considered a significant behaviour problem and was addressed in the individualized game card deck for each parent. Section 2 is a measure of parental self-efficacy that contains a rating scale of how effective parents perceive their disciplinary strategies to be for the worst child problem behaviour as determined by the parent (1=not effective to 7=very effective). Section 3 of the CBMS consists of questions regarding utilization of common reactive and proactive parenting strategies. Parents rated their use of 12 strategies on a rating scale (1=never to 7=usually). The CBMS has shown strong internal validity ($\alpha = .92$) and Pearson r for interrater reliability has ranged from .58 to .82 (Rielly, 1998, as cited in Feldman & Werner, 2002).

Parenting Stress Index - Short Form. The Parenting Stress Index Short Form (PSI-SF; Abidin, 1995) is a commercially available condensed version of the commonly used parenting stress measure, PSI (Burke & Abidin, 1980). The PSI-SF was administered pre- and posttest to evaluate changes in parents' perceived stress before and after the intervention. It consists of 36 items in total, with three subscales, Parental Distress (e.g., "Feel that I cannot handle things"), Parent-Child Dysfunctional Interaction (e.g., "Child doesn't giggle or laugh much when playing") and Difficult Child (e.g., "Child does things that bother me to be mean"), consisting of 12 items each. The measure has repeatedly shown strong internal consistency (e.g., $\alpha = .87$ in Abidin, 1995) and has been used in research on parents with LD ($\alpha = .96$ in Feldman et al., 2002).

Parenting Sense of Competence Scale. Parents were given the Parenting Sense of Competence (PSOC; Gibaud-Wallston & Wandersman, 1978, as cited in Mash & Johnston, 1983) (see Appendix E.3) scale pretest and posttest to evaluate whether The Family Game

training is related to an increased sense of self-efficacy as parents. The PSOC consists of two subscales comprising of 17 items². One subscale is Satisfaction (8 items), which measures the skill and understanding necessary for parenting that the participants feel they have achieved. The other subscale is Efficacy (9 items) and it examines the level of comfort participants feel in the parenting role and the extent to which they value it. The PSOC has demonstrated satisfactory internal consistency (total $\alpha = .79$, $.75$ for Satisfaction and $.76$ for Efficacy, without item 17; Johnston & Mash, 1989) in a sample of 215 fathers and 297 mothers (total of 297 households; Johnston & Mash, 1989). Moreover, test-retest reliability was also high for a sample of 99 parents, resulting in high Pearson r product-moment correlations (ranging from $.46$ to $.82$; all $p < .01$; Gibaud-Wallston, 1977).

Consumer Satisfaction Questionnaire. This was a posttest-only measure that was administered at the end of the study. Parents were asked to respond to questions on a survey (see Appendix E.4) about their perspective on the training and whether they felt positive changes occurred in their parenting strategies and child behaviour after the intervention had concluded. The survey questions were formulated by the SPI based on various aspects of the treatment and procedures. The measure consists of a Likert-type scale to rate satisfaction (e.g., Did you find The Family Game helpful in dealing with your child's behaviour? 3=Satisfied, 2=Not Sure, and 1=Not Satisfied). The questionnaire also contained a section for any other comments or suggestions about The Family Game that parents may want to express. The consumer satisfaction questionnaire was administered orally by another student completing a Master's degree in

² Johnston and Mash (1989) did not include Item 17 on the PSOC in their final assessment of internal validity due to a low factor loading. This item was included in the current study because pre-post changes were evaluated descriptively and statistical analyses were not carried out.

Applied Disability Studies (who signed the Agreement of Confidentiality; see Appendix F), rather than the SPI to allow the parents to feel more comfortable expressing their views of the training to someone not associated with the study.

Observation Data

Overview. The basis for the present study was the first section of the original The Family Game curriculum (Feldman, 2004b), namely, increasing child compliance. It was designed to teach parents positive alternative parenting strategies to increase child compliance with parental instructions and improve appropriate child behaviours. This section was comprised of three distinct components/parental objectives: clear instructions, recognition, and correction.

Operational Definitions. *Clear instructions.* For the purpose of this study, a clear instruction was operationally defined as an instruction that is stated as a declarative, not a question and the action expected of the child is obvious in the instruction (e.g., "Pick up your toys from the floor and put them in the toy box, Johnny" as opposed to "Can you clean up, Johnny?"). For this step, the parent must have full or partial view of the child and use a firm tone of voice that is loud enough for the child to hear and must clearly describe an action the child can perform. The parent must then allow 5 seconds for the child to initiate compliance or initiate a stop response. The instruction can be repeated once, if the child has not complied the first time. Research has shown that giving clear instructions in this manner is an important antecedent for achieving child compliance (e.g., McMahon & Forehand, 2005; Williams & Forehand, 1984).

Recognition. The recognition component taught the parent to recognize and acknowledge the child's compliance in a positive way within 5 seconds of the child's initiation or completion of the correct response. More specifically, the parent was expected to reinforce the good behaviour in the form of verbal praise (e.g., "Great job picking up all your toys!" or "Thank you for helping me set the table"), physical affection (hug or kiss) or tangible rewards (e.g., toys,

treats, videos, tokens, etc). Correct recognition also involved not reinforcing if the child complied, but also exhibited inappropriate behaviour (e.g., whining, swearing). Therefore, some recognition game cards included examples of the child complying, but simultaneously exhibiting inappropriate behaviour or a child stopping an inappropriate behaviour. In these examples, the parents were expected to withhold reinforcement even though the child did comply.

Correction. For Anne and Melissa, the definition of correction was revised from the original The Family Game manual (Feldman, 2004b) to include response cost to address specific behavioural challenges of older children. Correction was operationally defined as such: When the parent delivers a clear instruction and the child does not comply within 5 seconds of repeating the instruction, the parent must 1) give a warning to the child that a specific privilege or number of tokens will be removed if the child does not comply, and 2) remove the privilege if the child continues to be noncompliant after the warning. Response cost strategies have been effectively used to increase child compliance to parental instructions (e.g., Little & Kelley, 1989) and reduce inappropriate classroom behaviours (e.g., Bender & Mathes, 1995). Moreover, response cost has been used in conjunction with token reinforcement to increase academic performance in adolescents with behaviour disorders (Truchlicka, McLaughlin, & Swain, 1998).

For Anne's child, a token economy was implemented in order to build stronger motivation for the child to comply and to prevent the problem behaviours from occurring (i.e., severely destructive and aggressive behaviours). The tokens could be cashed in for a specified amount of money (10 stickers for \$1). Anne and her child were provided with an accompanying visual chart depicting how many stickers could be collected for specific behaviours. All decisions regarding the token economy were made in collaboration with Anne and her son and with Anne's consent to use money as a backup reinforcer. Before implementing the token economy, Anne's son was also asked if he would be willing to participate in the token program

and earn some extra money. He was further asked if he agreed to the specified behaviours for earning tokens listed on the visual chart.

For Melissa, the response cost was related to her child's natural environment and only one privilege could be taken away at a time, and only for the rest of the day (e.g., taking away computer time for the rest of the evening after the problem behaviour occurred).

Child behaviours. Child compliance was operationally defined as the child initiating the behaviour stated in a parental instruction within 5 seconds without repeated instruction and without engaging in problem behaviour (e.g., gently placing toys in the toy box rather than throwing them inside). Research on child compliance has identified task initiation as the main criterion for defining child compliance (e.g., McMahon & Forehand, 2003; Williams & Forehand, 1984).

Child noncompliance was operationally defined as not initiating the correct response within 5 seconds of the first delivery of the parent's instruction. Child problem behaviour was defined as screaming, crying, whining, throwing objects, swearing, and verbal or physical aggression.

Measuring Parent Behaviours. Two sets of behavioural data were collected: a) in the context of the game and b) naturalistic observations of parent-child interactions in the parents' homes.

Data collection during the game. The primary trainer (SPI) used The Family Game scoring sheet (see Appendix E.6) to get scores on the game cards and assess responses to scenarios presented in the game. Each card had a unique code and the parent's response to each card was recorded. An unprompted correct response was recorded with a "Y" whereas a prompted response was recorded as an "N". The total game scores were recorded as percentage correct for each skill covered. Data were collected by the SPI, who was also the primary trainer,

during the game on scoring sheets while the training was being done or scored at a later point using video.

Naturalistic observations. The primary trainer (SPI) assessed parental skill level and child behaviour at baseline, posttest and 1-month follow-up by observing parent-child interactions in the home. A partial interval recording form with 10-second intervals (see Appendix E.5) was used to record the parent and child behaviours specified. The child's compliance, noncompliance and problem behaviours were recorded at the same time. The parent was sometimes asked to implement a task in which the child could be given several instructions (e.g., cleaning up, setting table, getting ready for bed). If possible, the situations chosen were ones that the parents had reported to be problematic with respect to child compliance.

Interobserver Agreement (IOA)

The Family Game sessions. Both participants provided consent to video The Family Game training sessions. Therefore, IOA was collected by having an independent, specially trained, second observer view the video clips and code the parents' responses to game cards. The second observer was a Master's student in Applied Disability Studies and had prior experience in collecting behavioural data. She was naive to the purpose and procedures of the study. Using two IOA training videos (not used to calculate IOA), the SPI trained the second observer to minimum 85% agreement with the SPI on correct and incorrect responses to game cards. The second observer was provided with a document on scoring guidelines (See Appendix I) as well as a master list of all question codes (See Appendix E.7). Moreover, the second observer was instructed to freeze the video after listening to the parent's response during training sessions, record the score and then replay the video. This was done to prevent the trainer's feedback from influencing the second observer's scores. The second observer signed an agreement of confidentiality (see Appendix F) before she was trained. Data were recorded electronically using

The Family Game Scoring Sheets (see Appendix E.5) and uploaded to a shared, secure cloud storage account. IOA was calculated between the SPI and the second observer for 32% of all sessions, chosen at random, including baseline, training, posttest and follow-up. The IOA for The Family Game sessions ranged from 79% to 100%, with the overall average being 89% for all sessions.

Home observations. Both participants provided consent to allow video recording of home observations. Thus, IOA was collected by having the same second observer who completed IOA for game sessions view the videotaped home observations. As mentioned before, the second observer was naive to the purpose and procedures of the study as well as to the phase of the study during which the observations were conducted (i.e., baseline, posttest and follow-up videos were scored in random order). She was trained to minimum 85% total agreement by the SPI using 10-second partial interval recording (see Appendix E.5) with three IOA training home videos that were not used to calculate IOA. The second observer was provided with a document on scoring guidelines (see Appendix J). Data were scored electronically. Total IOA was calculated by scoring agreements on intervals that were scored the same, including occurrences and nonoccurrences, and then dividing the total number of agreements by the total number of disagreements plus agreements.

Agreement was calculated between the SPI and the second observer for 67% of all home observations conducted. Mean IOA for each parent behaviour was as follows: correct instructions was 89% (range 82% to 93%); incorrect instructions was 78% (range 68% to 85%); correct recognition was 99% (range 96% to 100%); correct correction was uniformly 100% across all scored videos. For child behaviours, mean IOA was as follows: child compliance was 84% (range 75% to 88%); child noncompliance was 82% (range 66% to 97%); child problem

behaviour was 86% (range 78% to 93%). Overall IOA across all behaviours was calculated in home observations, which was 89%.

Study Procedures

All questions in all of the measures as well as any other procedures of the study were communicated verbally and the researchers recorded verbal responses to the questions.

Recruitment procedure. Information letters (see Appendix C) were sent to various agencies explaining the purpose of the study and seeking their help in informing potential participants about the study. For any initial contact that occurred with the parents with LD, a support worker or other person of the parent's choice was present as a mediator to ensure comprehension and avoid any possible issues with coercion. More specifically, the researchers partnered with community agencies to recruit potential participants through their support workers or significant others, who subsequently attempted to create an opportunity for the parents to meet the researchers. This was carried out by requesting the support worker or significant other to hold a meeting with the researchers, which the parents were invited to attend to hear about the study. The worker or significant other remained neutral during the meeting and did not encourage parents to participate in the research unless the parents asked for their input.

If parents expressed an interest in participating in the research, they were given and read a consent form (see Appendix A) explaining what the study was about in simplified language, followed by a few basic comprehension questions to ensure that they understood what the study involved. Their support worker or another person of the parents' choosing was present to attest that, in their opinion, the parents gave informed, non-coerced consent. This consent procedure has previously been used by Dr. Feldman in several research projects involving parents with learning difficulties (e.g., Feldman & Case, 1999), as well as in the recent 3Rs human rights training for persons with intellectual disabilities (Feldman et al., 2012).

Although the parents were given written information and forms, all communication was conducted verbally during the consent procedure. During the process of obtaining informed consent, parents were assured that they have the right to withdraw from the study at any time they choose to do so, without penalty. In order to participate, the parents and children had to agree to allow us to come into their home to play the game (with the parents only) and observe parent-child interactions. None of the children dissented to being observed.

Pretest. After informed consent was obtained from parents, a preliminary session was arranged to administer standardized measures as described above. Rather than following a script, the initial interview was meant to be a conversation with the parents to develop rapport and get the parents' perspective on child behaviours. During the first session with each parent, the SPI arrived at the parent's home with coffee and baked snacks for a positive first-time meeting. The SPI and the parent established a regular weekly meeting time to begin implementation of the training program. An informal interview was conducted with parents to identify specific child behaviour management problems parents were experiencing so that an individualized card deck could be arranged for each parent to maximize potential benefits of The Family Game training. Administration of the questionnaires and the interview lasted for one and a half to two hours.

Baseline. In the baseline session, parents were told that the researchers would like to hear their responses to some parenting scenarios before getting started with the first game session. Parents were told that they will not be given feedback in this part of the study, but they were assured that once the game sessions begin, they would be given feedback on their answers to the game questions for most of the parenting scenarios and they will learn correct responses for those. Parents were asked to roleplay or act out their answers to the parenting scenarios presented to them verbally, but no modeling or feedback was provided. However, parents received positive statements for participating in the baseline session (e.g., "We appreciate you giving answers to

these questions"). A total of 45 cards (30 training cards and 15 generalization cards) were tested in the baseline session, interspersed across the three skill categories. The 30 training cards as well as the 15 generalization cards were equally divided between Instructions, Recognition and Correction. The baseline session lasted for one hour or less for both parents. For Anne, the trainers transitioned from the baseline session to the first game session in the same meeting. Baseline points for cards on skills yet to be trained were continually collected in subsequent game sessions over the course of the training, in accordance with multiple baseline design.

As mentioned before, the SPI arranged separate sessions for naturalistic observations and used partial interval recording with 10-second intervals (see Appendix E.5) to collect baseline data on the following parent behaviour categories: correct instructions, incorrect instructions, correct praise and correct corrections (See Appendix J for operational definitions). Three child behaviours were also recorded: child compliance, child noncompliance and child problem behaviour. The home observations were video recorded and were about 30 minutes or less in length, depending on the home routine being observed.

The Family Game training. *Game sessions.* Each Family Game training session was conducted individually with parents in their own homes. We endeavoured to meet at least once every week until the parents reached mastery for all three skills. Moreover, we attempted to schedule make-up sessions for any missed appointments, depending on parents' willingness and availability. The mastery criterion for roleplaying the correct responses to the game cards for each skill was 80% across two consecutive sessions. We initially anticipated that it would take approximately 3 months to complete the training, but this duration was relative to frequency of sessions and how quickly parents acquired the skills. In total, both parents took approximately 4 months to complete training, not including follow-up.

Each Family Game session was conducted by two trainers (the SPI and another Master's student) who facilitated the game and provided corrective feedback and positive reinforcement respective to the parents' responses to the scenarios presented. The SPI and the parent corresponded each week (by phone or in person) about what day and time to meet for The Family Game session. Each game session was run for one hour to one and a half hours.

Playing the game. For most game sessions, a deck of 20 cards was prepared for each participant, with a higher ratio of cards from the skill that was currently being trained (e.g., during Instructions training, there were 10 Instruction cards and 5 cards each from other categories). At changeover points, 5 generalization cards from all three categories were included in the deck. The trainers had a separate deck of cards for themselves, containing only situations about the current skill being trained. The SPI played the game with the parent and second trainer for the first 3-4 sessions and eventually transitioned to providing feedback to both the parent and second trainer while they played the game with each other. Note that when the trainers played the game, they only modelled correct responses to the skill(s) being trained.

Each player selected a game playing piece and rolled two dice. Each participant had a turn to move forward on the game board (see Appendix E.8) in sequence, depending on the number on the dice. Everyone playing the game in a particular session kept going until all of the cards in their deck had been drawn. This meant going around the game board several times. During the game, parents acted out or roleplayed the response to the scenario on the card, with one of the trainers acting as the child. For example, if the card read, "Your child's toys are all over the floor and you want them to tidy up, what do you say?" it would call for a clear instruction from the parent and the correct response to this scenario would be something like "Pick up your toys and put them in the toy box, Johnny" as opposed to "Clean up, Johnny." When the parent gave a correct response, the trainers provided enthusiastic and specific praise. If

the parent failed to respond correctly, the trainers found something in the response to reinforce and modeled a fully correct response. The parent then immediately practiced the same scenario and usually scored correctly on it. All sessions in which parents played The Family Game were video recorded. The videos were later reviewed by a second observer for IOA purposes.

The game board and game cards. The game board (see E.8) was designed to allow participants to move the number of squares indicated by their throw of the dice until they reached the finish line. Each square had the required action inscribed on it, e.g., Move 2 Spaces Ahead, Draw a Card, Tell a Family Story, etc. When the parent landed on a "Draw Card" square, she picked up a card from her own deck on the board. Some of the squares on the game board, such as Lose a Turn, or Tell a Family Story, were included to make the game more varied and interesting. On average, 60% of the squares on the game board were "Draw Card" squares. Sometimes, the board had to be modified in the interest of time, so that there was a higher probability of parents drawing cards and practicing parenting scenarios.

Each parent worked with her own deck of cards (see Appendix E.7) so that we could individualize the scenarios they needed to act out based on known issues and the age of the child. The deck was programmed to meet the individual needs of each parent based on information collected through pretests (i.e., CBMS) and the informal interview. If we were aware of a particular problem area for a parent, we practiced questions related to that area again. Some scenarios used were those from the original manual (Feldman, 2004b), which were formulated using feedback from numerous parents with LD and their workers about the types of behaviours they find most challenging during daily routines at home given different child ages and situations.

The game cards were presented and trained in random order within each skill area. For example, during the first phase, which was training for Instructions, cards from this skill area

were shuffled amongst other skill areas but only Instruction cards were trained until mastery criterion (80% across 2 sessions) was reached, before moving on to the next skill area. When the parent chose a card for a skill not yet trained, she roleplayed the response but received no training on this card. In this manner, training occurred sequentially preserving the multiple baseline across skills design. When moving to the next skill to be trained, parents continued to receive feedback on the answers to previously trained cards. That is, if the parent acquired the skill of giving clear instructions and was working on Recognition, if the parent drew an Instruction card, she still received feedback on her performance on Instructions. However, she would not receive feedback to her response to a Correction card.

Generalization promotion strategies. Several generalization strategies recommended by Stokes and Baer (1977) were used for promoting generalization of skills taught in the game to the home setting. Strategies included training multiple exemplars and programming common stimuli within the game by incorporating a variety of stimulus examples that parents potentially and actually deal with on a daily basis in their homes. These strategies were combined with other strategies recommended by Stokes and Baer (1977), including "teaching loosely" which entailed varying noncritical aspects of home situations in the scenarios and allowing different variations of correct responding (e.g., correct recognition could include "good job in cleaning your room" as well as "thank you for cleaning your room"). Anne verbally expressed difficulty in remembering lessons so we attempted to "mediate generalization" for her through reminder posters of key points in each skill area that she put up in her home.

Generalization cards. During the baseline session, in addition to the 30 game cards (10 per skill), we tested generalization cards (5 per skill), which were interspersed with the rest of the game cards that received training. Generalization cards did not receive training and were probed at every changeover point to a new skill (e.g., from before moving from Instructions to

Recognition). That is, every time the parent reached mastery criterion for one skill area, generalization cards from all skill areas were probed by embedding them into a training session. The game sessions in which generalization cards were included were longer than regular training sessions (approximately 2 hours). This pattern was repeated throughout the study, starting at baseline, and ending at follow-up. The 15 generalization cards were chosen at random from the pool of cards.

Home observations (in-situ generalization probes). Observations of parent-child interactions at home in daily routines were conducted at baseline, at posttest and at follow-up. These observations evaluated whether parents generalized interactional skills and proactive parenting strategies learned through the game to actual interactions with their children, and whether the child's behaviour improved. Naturalistic observations were conducted at various times of the day, depending on the parents' feedback about routines that were particularly troublesome, such as bedtime. In some instances when the SPI visited for a home observation, it was necessary to contrive the situation and ask the parent to do something with the child, such as ask the child to clean up toys or clothes. The reason for contriving the situation was to record data on how well parents were transferring skills learned during the game to the actual interactions with their child to foster child compliance. The observations lasted 30 minutes or less depending on which home routine was being observed. During these observation sessions, parents were not provided with corrective feedback on their use (or lack of use) of parenting strategies. Any difficulties experienced in actual parent-child interactions were addressed through scenarios on the game cards while playing the game with the trainers.

Posttest. When the parents reached mastery criterion on all three skills areas, posttest scores on measures of parental self-efficacy (PSOC and CBMS), child behaviour management strategies (CBMS), child behaviour outcomes (CBMS) and parental stress (PSI-SF) were

obtained to evaluate treatment effects. After the posttest session, the Consumer Satisfaction Questionnaire was verbally administered by another RA to obtain the parents' perspective on the intervention's benefit to them.

Follow-up. Two types of follow-up sessions were conducted one month after the intervention was complete for both participants. First, a follow-up was done within the game context, in which the trainers provided feedback to the training cards in the deck. Another follow-up was done as a probe, similar to baseline, in which the game was not played and the SPI verbally presented various parenting scenarios and asked the parent to roleplay the answer. As in baseline, parents were told that the SPI would not provide feedback for specific answers, but parents were thanked for answering questions. This was done to determine what the follow-up scores were when parents' answers were not influenced by the trainers' feedback. The probe follow-up contained some different questions (randomly selected) from the game follow-up. Both follow-ups included 5 generalization cards from each category (Instruction, Recognition and Correction). A follow-up home observation was also conducted for both parents.

Additional training. Parents who were not using all of the skills during the follow-up observational probe were offered further training in their homes. The intention was to provide instructions, modelling and feedback while the parent interacted with her child, trying to get the child to complete a task (e.g., cleaning the child's room). Melissa agreed to do one extra training session, but only in the form of a video feedback session (Phaneuf & McIntyre, 2007; 2011). Video clips of Melissa's home observations were played during the training and paused at several points to discuss what had happened in those particular scenarios. The parent was given verbal praise for skills used appropriately (e.g., giving clear instructions) and given corrective feedback for skills that needed improvement (e.g., praising child after compliance) on a 1:1 ratio. In other words, for every instance of corrective feedback given to the parent, the trainers also found one

skill to praise within the home video. Melissa's family was unavailable for further home observations. Anne was offered more in-home training sessions, but she was unavailable to be contacted after the 1-month follow-up.

Debriefing. After the second follow-up session, the SPI read a debriefing letter to the parents (see Appendix B), and each parent's specific results in the study were orally summarized to them. Parents were given a copy of the letter to keep.

Results

Figures 1 and 2 show Anne and Melissa's multiple baseline results, respectively, on the game and generalization cards, and the *in-situ* generalization probes. Child compliance, child noncompliance and child problem behaviours are displayed in Figures 3 and 4. Results from pre-post evaluation measures are summarized in Tables 1-8 for each participant.

Training Cards

Anne's training results. As depicted in the multiple baseline across skills in Figure 1, Anne met the mastery criterion for all three skill categories trained in the Family Game: Instructions, Recognition and Correction. For Instructions (see upper panel in Figure 1), Anne's baseline training score was 10% and her training scores ranged from 0% to 100%, with a mean score of 76% over 19 training sessions. Anne's Instructions scores showed a clear increasing trend after training started in this category and she initially met mastery criterion. However, her scores dropped below mastery once training on the next category, Recognition, began. At this point, we realized that Anne may have started to memorize answers to some game cards in a rote manner and therefore was unable to answer correctly when she encountered new Instruction cards. In response, we incorporated a wider range of multiple exemplars, so Anne could learn to answer correctly even when the situations were slightly different. Anne met mastery for Instructions once again after retraining and her scores stayed at or above the mastery criterion for

the rest of the training sessions, using a wide range of instruction cards. The Corrections category remained in baseline while Anne was retrained on Instructions.

Anne's baseline scores for Recognition (see middle panel in Figure 1) ranged from 0% to 50% over five sessions and her training scores ranged from 60% to 100% over 15 training sessions. Anne's Recognition scores remained consistently high after the game was changed to include a wider range of exemplars for each category in each training session. Anne's baseline mean for recognition was 30%, which significantly increased to 90% after training in Recognition. For Correction (see lower panel in Figure 1), Anne's baseline scores ranged from 0% to 20% over 14 sessions and her training scores ranged from 50% to 90% over seven training sessions. The baseline mean for Correction was 2%, which increased to a mean of 73% after training on Correction. Anne's follow-up game score was 100% for Instructions, 80% for Recognition and 100% for Correction, respectively. Her follow-up probe was 80% for Instructions, 90% for Recognition and 83% for Correction, respectively.

Anne's generalization cards. Generalization of skills trained in the game was evaluated through five randomly selected cards from each category that never received training. Generalization cards were tested at baseline, every changeover point (i.e., mastery of skill), posttest and follow-up, for every category. On these cards, Anne's baseline score for Instructions (see upper panel in Figure 1) was 20%, which increased to 70% upon initially mastery of Instructions and to 80% at posttest. At the 1-month follow-up, Anne's Instructions scores were 80% and 75% for game follow-up and probe follow-up, respectively. On the Recognition generalization cards (see middle panel in Figure 1), Anne had a high baseline score of 80%, which increased to 100% at mastery of recognition, at posttest, which maintained at follow-up. For Correction (see lower panel in Figure 1), Anne's baseline score for generalization cards was

20%, which increased to 80% at posttest. Correction generalization scores for game follow-up and probe follow-up were both 60%.

Melissa's training results. Figure 2 depicts Melissa's multiple baseline across skills graph and shows that she too mastered Instructions, Recognition and Correction within The Family Game. She began with a high baseline score of 70% on Instructions (see upper panel in Figure 2), but it was not quite at mastery level, so training was started with Instructions. Although there was little room for increase, Melissa quickly mastered Instructions, the mean being 88% for a total of thirteen training sessions. Her training scores on Instructions ranged from 70% to 100%.

Melissa's baseline mean for Recognition (see middle panel in Figure 2) was 46%, which increased to a mean of 94% over nine training sessions. Melissa's baseline Recognition scores ranged from 0% to 75% and her training scores on Recognition ranged from 80% to 100%. For Correction (see lower panel in Figure 2), Melissa's baseline mean was 3% and baseline scores ranged from 0% to 20%. After training, Melissa's Correction scores increased to a mean of 77% over seven training sessions, with training scores ranging from 40% to 100%.

At the 1-month follow-up, Melissa's Instruction score was 83% on the game session and 90% on the probe. For Recognition, Melissa's game follow-up score was 100% and probe follow-up score was 80%. Melissa's Correction score was 83% and 70% for the game follow-up and probe follow-up, respectively.

Melissa's generalization cards. For unknown reasons, Melissa generally had higher baseline scores on generalization cards, despite being randomly selected from the deck. As depicted in Figure 2, Melissa's baseline score on generalization cards within Instructions (see upper panel in Figure 2) was 80%, which increased to 100% at posttest and fluctuated between 70% and 100% at the 1-month follow-ups. For Recognition (see middle panel in Figure 2),

Melissa's baseline score was 80%, which increased to 100% at posttest and maintained at 100% for both types of follow-up. On Correction (see lower panel in Figure 2), Melissa scored 20% on generalization cards at baseline, which increased to 80% at posttest and maintained at 100% for the game follow-up, but dropped to 60% for the probe follow-up.

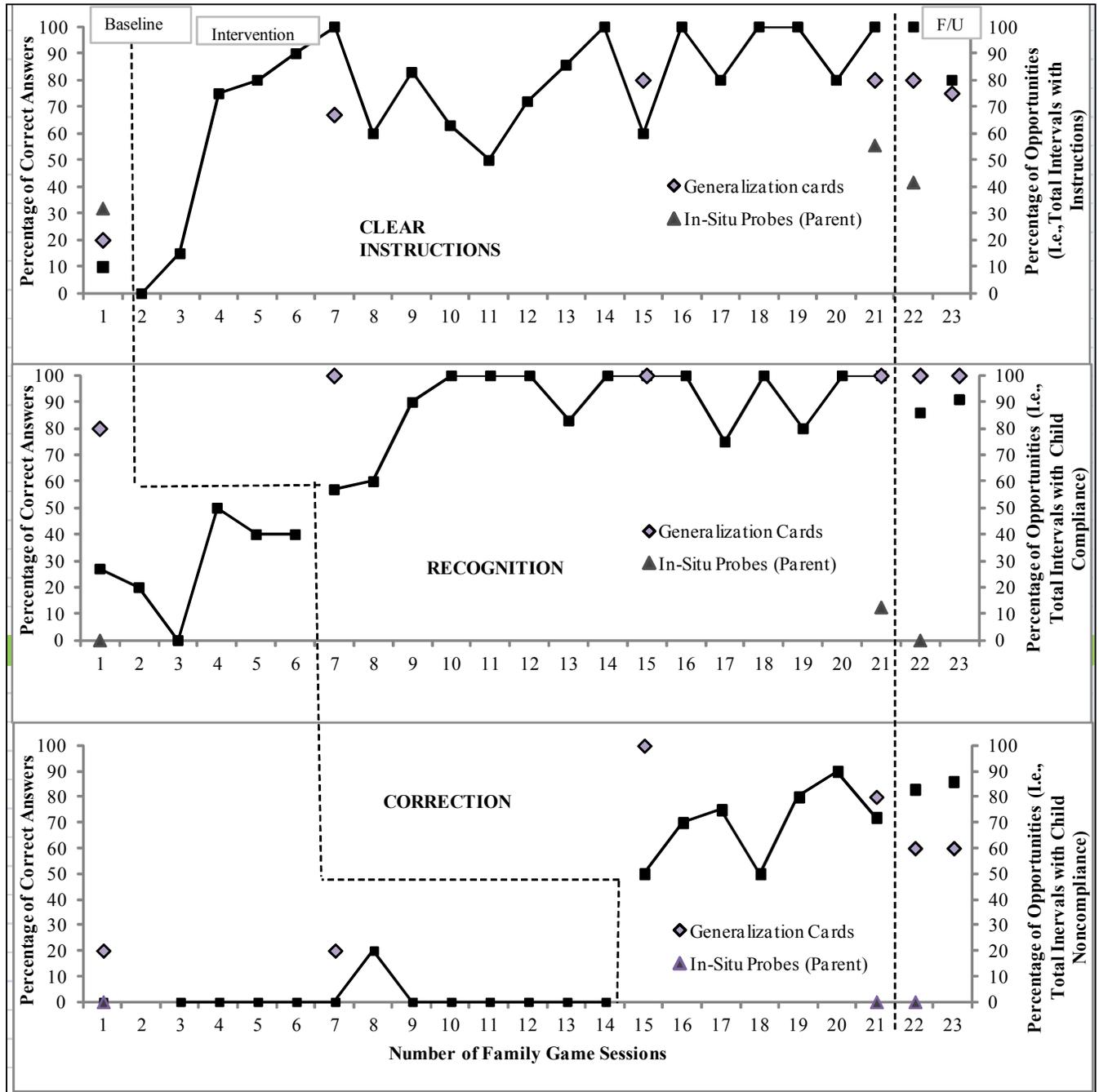


Figure 1. Anne's multiple baseline depicting three sets of data: 1) training cards, 2) generalization cards, and 3) *in-situ* parent probes. The first two sets of data are graphed along the primary y-axis (percentage of correct answers) and the third set of data is graphed along the secondary y-axis (percentage of opportunities) as described on page 38.

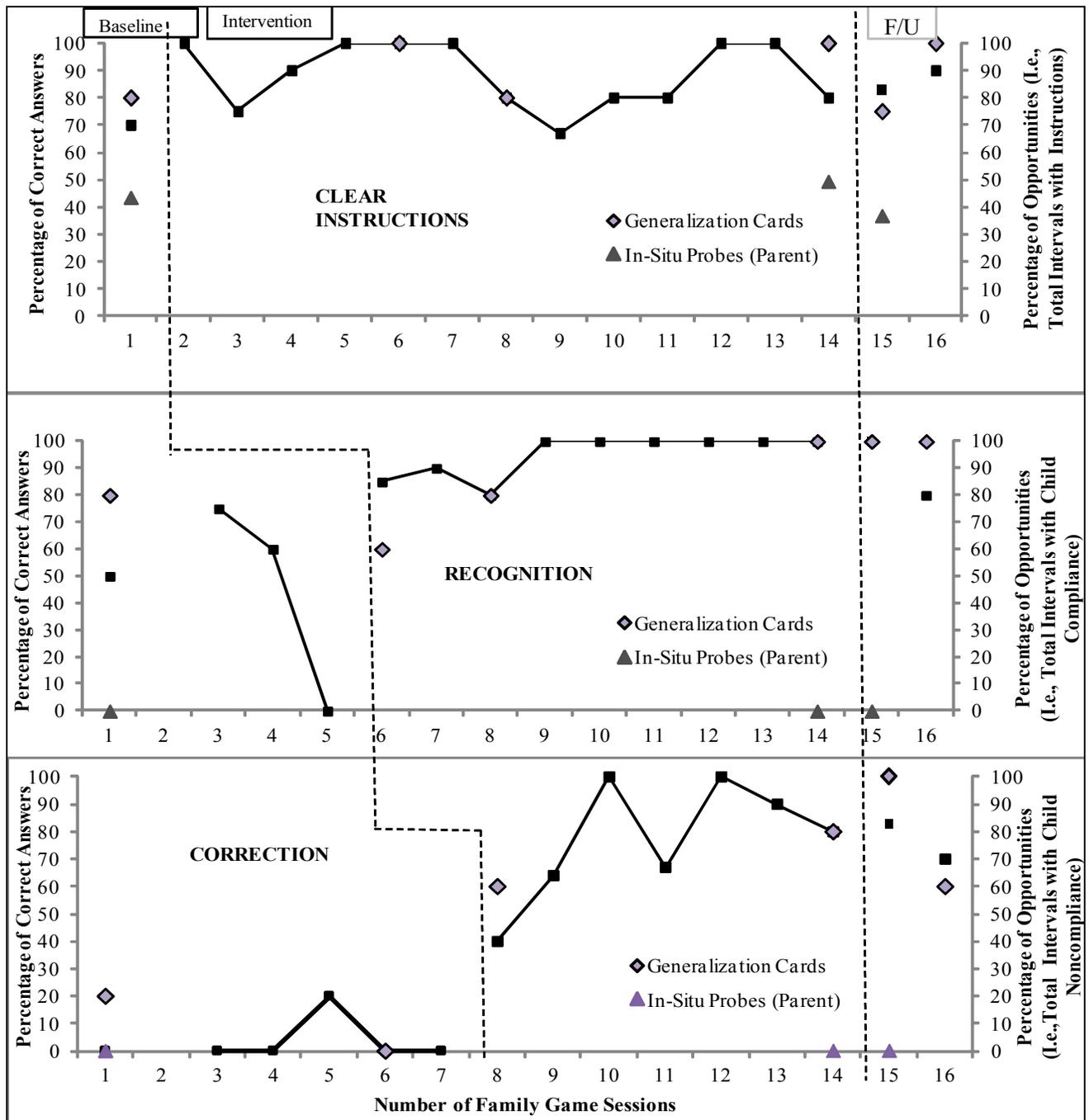


Figure 3. Melissa's multiple baseline depicting three sets of data: 1) training cards, 2) generalization cards, and 3) *in-situ* parent probes. The first two sets of data are graphed along the primary y-axis (percentage of correct answers) and the third set of data is graphed along the secondary y-axis (percentage of opportunities) as described on page 38.

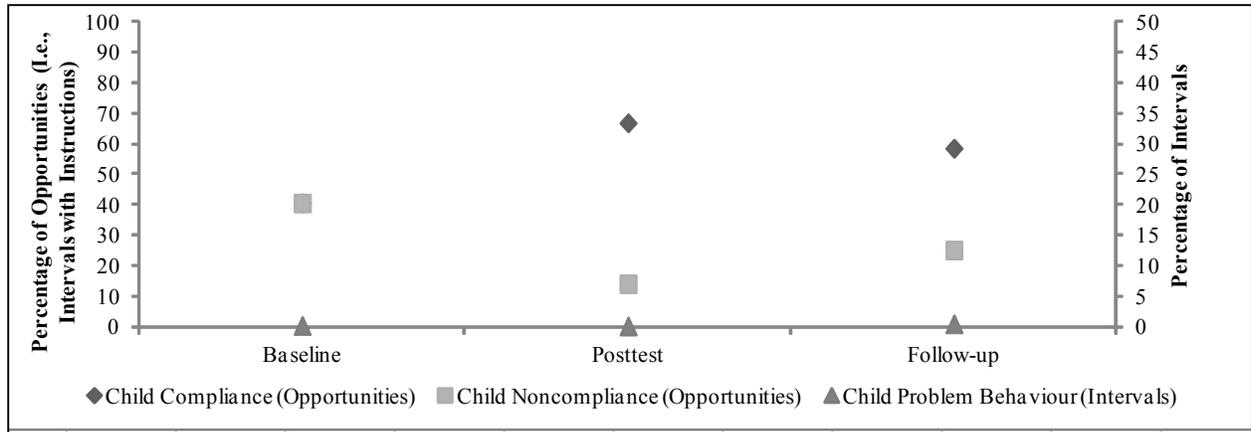


Figure 3. This figure depicts three child behaviours for Anne's son: 1) child compliance, 2) child noncompliance, and 3) child problem behaviours. The first two behaviours are graphed along the primary y-axis (percentage of opportunities, based on number of intervals in which parental instructions were given) and the third behaviour is graphed along the secondary y-axis (percentage of total intervals). See page 40 for more details.

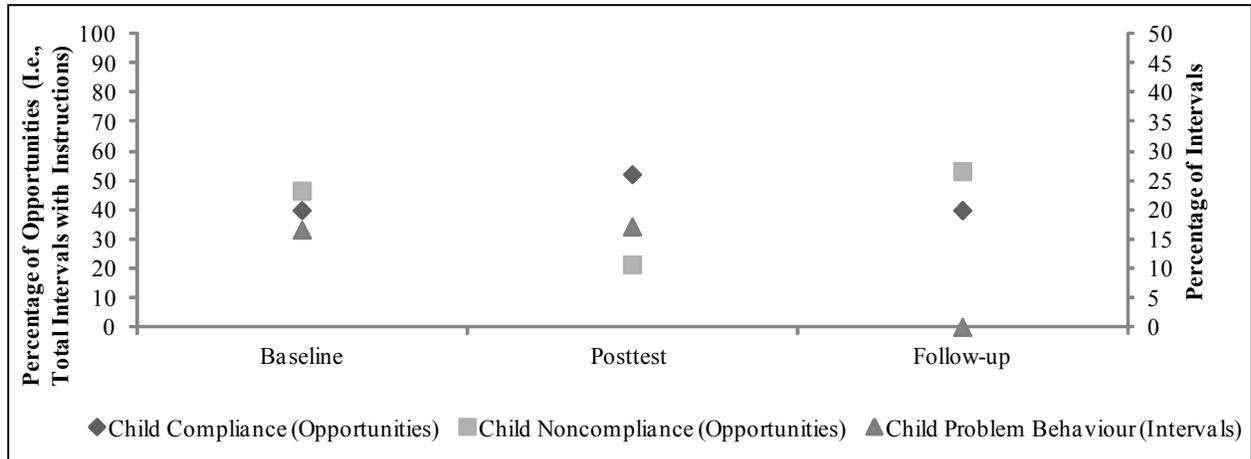


Figure 4. This figure depicts three child behaviours for Melissa's daughter: 1) child compliance, 2) child noncompliance, and 3) child problem behaviours. The first two behaviours are graphed along the primary y-axis (percentage of opportunities, based on number of intervals in which parental instructions were given) and the third behaviour is graphed along the secondary y-axis (percentage of total intervals). See page 40 for more details.

Generalization to Home Setting

In-situ parent probes were graphed along the secondary y-axis in Figures 1 and 2, which was percentage of opportunities based on each skill area. Specifically, percentages for *in-situ* Instructions (see secondary y-axis on upper panels in Figures 1 and 2) were calculated by dividing the number of intervals in which correct instructions were given by the total number of instructions (i.e., sum of correct and incorrect). For Recognition, *in-situ* percentages were calculated by dividing the number of intervals in which there was correct praise given by the total number of intervals in which there was child compliance without problem behaviour (see secondary y-axis on middle panels in Figures 1 and 2). Correction percentages for *in-situ* probes were calculated by dividing the number of intervals in which the parent corrected noncompliance according to the operational definition by the number of intervals in which there was child noncompliance (see secondary Y-axis on lower panels in Figures 1 and 2).

Anne. Anne's *in-situ* probes in Figure 1 indicate mediocre generalization of parenting skills learned in the Family Game to the home setting for Instructions and Recognition and no generalization for Correction. Anne's Instructions (see top panel in Figure 1) probe was 32% at baseline and increased to 56% at posttest. The 1-month follow probe for Instructions was 42%. Anne's Recognition probe (see middle panel in Figure 1) at baseline was 0%, which slightly increased at posttest to 13% and dropped to 0% at follow-up. Anne's Correction probes (see lower panel in Figure 1) remained at 0% from baseline to posttest and also at follow-up.

Melissa. Figure 2 shows low *in situ* generalization of parenting skills from the game to the home setting for Instructions and no improvement in generalization for Recognition and Correction. Melissa's baseline home probe for Instructions (see top panel in Figure 2) was 43%, which slightly increased to 49% at posttest and dropped to 37% at follow-up. Her Recognition probes (see middle panel in Figure 2) remained at 0% at baseline, posttest and follow-up, as no

instances of correct praise were observed. Melissa's Correction probe (see lower panel in Figure 2) was 0% at baseline, posttest and follow-up.

Child behaviour. As depicted in Figures 3 and 4, percentages for child compliance were calculated by dividing the number of intervals in which the child complied with an instruction by the total number of intervals in which instructions were given. Similarly, child noncompliance was calculated by dividing the number of intervals in which the child did not follow instructions by the total number of intervals in which instructions were given. Child problem behaviour was calculated based on percentage of intervals in which there was any instance of problem behaviour (this was distinct from noncompliance; see Appendix J).

Figure 3 shows that child compliance for Anne's son was 40% at baseline, which increased moderately to 67% at posttest and was 58% at follow-up. Child noncompliance decreased from 40% at baseline to 14% at posttest. At follow-up child noncompliance was 25%. There were no changes in child problem behaviour (0% at baseline, posttest and follow-up).

As seen in Figure 4, Melissa's daughter scored 40% on child compliance at baseline, which slightly increased to 52% at posttest. This was not maintained at follow-up, as her compliance dropped back to 40%. Child noncompliance for Melissa's daughter was 47% at baseline, 22% at posttest and 53% at follow-up. Child problem behaviour was 17% at baseline, 17% at posttest and 0% at follow-up.

Child Behaviour Management Survey

Child behaviour rating. Behaviour problems in children were evaluated through parent report on the Child Behaviour Rating subscale of the CBMS as well as through home observations (as described above). The moderate increases in child compliance from baseline to posttest were consistent with CBMS results for both participants, showing that decreases in oppositional behaviour were not only observed directly but also perceived by parents. Anne's

ratings of child problem behaviours are summarized in Table 1. Any behaviours rated as 5, 6 or 7 were considered a significant behaviour problem. Some individual items that indicated a significant decrease at Anne's posttest included oppositional behaviour/noncompliance (rated 6 at pretest and 3 at posttest), property damage (rated 7 at pretest and 4 at posttest), and throwing objects (rated 6 at pretest and 2 at posttest). As shown in Table 1, Anne's perceived number of child problem behaviours decreased from 21 at pretest to 9 at posttest. For Melissa, there was only one item that showed a clinically significant change, which was oppositional behaviour/noncompliance (rated 6 at pretest and 3 at posttest). There were no changes in perceived number of problem behaviours from pretest to posttest. Ratings of some items such as sleep problems increased significantly at posttest, but these may have been outliers due to intervening variables such as ADHD medication and change in routine resulting from end of school.

Table 1

Pretest and Posttest Ratings of Child Problem Behaviours on the CBMS

	Anne		Melissa	
	Pretest	Posttest	Pretest	Posttest
Number of problem behaviours	21	9	5	5
Mean Rating	4.10 ^a	3.05 ^a	2.20 ^a	4.10 ^a
Total Score	172	126	92	88

^a On a scale of 1 to 7 (1=never a problem; 7=always a problem)

Parenting Strategies. There were no significant changes in Anne's rating of parenting strategies pretest to posttest on the CBMS, due to high pretest scores on proactive strategies. Anne's rating of reactive strategies did not decrease after training. See Table 2 for a summary of

results. For Melissa, there was a significant decrease in ratings of two reactive strategies scored highly at pretest (i.e., time-out and negative verbal). See Table 3 for results.

Table 2

Anne's Ratings of Parenting Strategies on the CBMS

	Pretest	Posttest
Physical or mechanical restraint (R)	5	4
Nothing/ignore (R)	2	4
Time-out (R)	7	7
Response cost (R)	6	7
Positive verbal for appropriate behaviour (P)	6	7
Positive physical and tangibles for appropriate behaviour (P)	6	6
Positive physical and tangibles for inappropriate behaviour (R)	4	3
Proactive and preventative (P)	2	7
Negative verbal (R)	7	4
Distraction or change of location (R)	2	2
Models or teaches appropriate behaviour (P)	4	2
Corporal punishment (R)	2	2

Note. (P) = proactive; (R) = reactive

Table 3

Melissa's Ratings of Parenting Strategies on the CBMS

	Pretest	Posttest
Physical or mechanical restraint (R)	1	1
Nothing/ignore (R)	4	4

Time-out (R)	6	1
Response cost (R)	7	7
Positive verbal for appropriate behaviour (P)	6	7
Positive physical and tangibles for appropriate behaviour (P)	6	7
Positive physical and tangibles for inappropriate behaviour (R)	1	1
Proactive and preventative (P)	6	7
Negative verbal (R)	6	3
Distraction or change of location (R)	2	4
Models or teaches appropriate behaviour (P)	5	7
Corporal punishment (R)	1	1

Note. (P) = proactive; (R) = reactive

Parental Stress

Table 4 depicts both participants' stress level before and after the training. Anne was at the 99th percentile for total stress before the training which is well above the clinical threshold of 85th percentile, and remained at the same level after training. Melissa, however, showed a significant decrease to 65th percentile in total stress after Family Game training. Melissa's score on the Defensive Responding subscale, which controls for social desirability (Nederhof, 1985), was not significant (must be at or below 10th percentile to indicate a social desirability bias in scores), lending support to the validity of change in total stress at posttest.

Table 4

Pretest and Posttest Percentile Scores on PSI-SF

	Anne		Melissa	
	Pretest	Posttest	Pretest	Posttest

Defensive Responding	99	96	25	15
Parental Distress	95	95	10	25
Parent-Child Dysfunctional Interaction	97	97	93	60
Difficult Child	96	96	97	85
Total Stress	99	99	89	65

Note. Reported in percentile scores.

Parental Self-Efficacy

Two measures of parental self-efficacy were utilized, one of which was the CBMS. The Child Behaviour Management Strategies subscale of the CBMS was used to assess how effective parents perceived their child behaviour management strategies to be in managing the child's most difficult behaviour. Anne selected verbal aggression as her son's most problematic behaviour. Time-out for 30 minutes to an hour was her most commonly used behaviour management approach at pretest, which changed to response cost with token reinforcement at posttest (token response cost was taught in the game; see pages 19-20 for operational definition of Correction). All items showed a level of increase from pretest to posttest. More specifically, Anne's rating of perceived effectiveness of the behaviour management strategy increased from 1 at pretest to 7 at posttest. Anne's rating of the effectiveness of token response cost in teaching the child a better way of behaving indicated a significant increase (1 at pretest and 7 at posttest), with moderate increases in stopping and preventing problem behaviour. Scores are summarized in Table 5.

Melissa selected temper tantrums as her daughter's most problematic behaviour and indicated grounding/loss of all privileges as her most commonly used strategy at pretest, which changed to response cost delivered with a warning first at posttest (response cost was taught in

the game; see pages 19-20 for operational definition of Correction). Although Melissa had a high baseline on perceived general effectiveness of the approach, her scores increased on perceived effectiveness of response cost in preventing the problem behaviour, teaching the child a better way of behaving (both were 2 at pretest and 7 at posttest) as well as stopping the problem behaviour (1 at pretest and 4 at posttest). Scores are summarized in Table 6.

Table 5

Anne's Rating of Effectiveness of Child Behaviour Management Strategies

	Pretest	Posttest
Effectiveness of this approach	1	4
Stopping the problem behaviour when it occurs	1	4
Preventing the problem behaviour from occurring again	1	3
Teaching the child a better way of behaving	1	7
Consistency of the approach ^a	5 ^a	5 ^a

^a Rated on a scale of 1 to 5 (1 = not consistent; 5 = very consistent). Every other item is rated on a scale of 1 to 7.

Table 6

Melissa's Rating of Effectiveness of Child Behaviour Management Strategies

	Pretest	Posttest
Effectiveness of this approach	6	6
Stopping the problem behaviour when it occurs	3	6
Preventing the problem behaviour from occurring again	2	7
Teaching the child a better way of behaving	2	7
Consistency of the approach	5 ^a	5 ^a

^a Rated on a scale of 1 to 5 (1 = not consistent; 5 = very consistent). Every other item is rated on a scale of 1 to 7

The PSOC was also used to measure parental self-efficacy. Anne's total score on the PSOC slightly increased after training, indicating a small increase in parental self-efficacy at posttest. There was an increase in ratings on the Satisfaction subscale as well as the Efficacy subscale. Melissa's total score showed a slight overall decrease after training, mainly due to the significant decrease in ratings on Satisfaction items on the PSOC. There was a slight increase in Melissa's ratings on the Efficacy subscale. PSOC results are summarized in Table 7 for both participants.

Table 7

PSOC Ratings at Pretest and Posttest

	Anne		Melissa	
	Pretest	Posttest	Pretest	Posttest
Satisfaction				
Mean Rating	3	4.11	3.44	1.44
Total Score	27	37	31	13
Efficacy				
Mean Rating	2.5	3.38	2.88	3.5
Total Score	20	27	23	28
Total Scale				
Mean Rating	2.76	3.76	3.18	2.41
Total Score	47	64	54	41

Note. Higher are associated with greater parental self-efficacy as items 1, 6, 7, 10, 11, 13, 15 and 17 are reverse coded.

Consumer Satisfaction

Both participants provided ratings of 3 on the consumer satisfaction rating scale (1 = did not like it; 2 = it was all right/don't know; 3 = liked it/enjoyed it) across all seven items. See Table 8 for a summary of the questionnaire results. Anne expressed that giving clear instructions to her son was effective at home. She indicated that she had "a lot of fun" playing the game and the strategies taught in the game were effective for her son. Melissa stated that she liked the trainers who facilitated the game and she would be interested in playing the game again.

Table 8

Consumer Satisfaction Ratings

	Anne	Melissa
Did you enjoy playing the game?	3	3
Do you feel that playing the game helped you as a parent?	3	3
Do you feel that you are able to use the skills learned in the game at home?	3	3
Do you feel that your child's behaviour has improved since you started the Family Game?	3	3
Would you like to join another Family Game group and learn some more parenting skills?	3	3
Would you recommend the Family Game to other parents?	3	3
Did you like the group leader?	3	3

Effect Size of the Intervention

Percentage of nonoverlapping data points (PND; Scruggs & Mastropieri, 1987) was calculated for this study in order to draw a general conclusion about the effectiveness of The Family Game training package. This statistic was selected because there were no outliers in baseline and percentage of data points exceeding the median (PEM; Ma, 2006) would overestimate the effect size. For Anne, the aggregate PND score for all three categories of training cards was 100%. For Melissa, PND for the Instructions category was 92% and the rest were 100%, resulting in an aggregate of 97% for all three categories. Overall, the mean effect size for both participants was 99%, indicating that The Family Game is highly effective in teaching parents how to give clear instructions, praise child compliance and correct child noncompliance to roleplay cards within the training setting. However, we cannot draw the conclusion that this treatment package leads to improvement of all trained parenting skills in the home setting (due to low *in situ* generalization in Recognition and Correction). PND was not calculated for the untrained cards and *in situ* generalization probes because of the small number of data points.

Discussion

This intervention evaluation presented preliminary results indicating that The Family Game training package is an effective intervention for improving roleplayed performance on three specific parenting skills in the training setting: delivering clear instructions, recognizing appropriate and inappropriate behaviour, and correcting child noncompliance. Both participants consistently attained a high percentage correct on trained parenting scenarios and met mastery criterion (80% across two consecutive sessions; see Figures 1 and 2) in each skill area. Both parents also maintained criterion scores on training cards in all three skill areas at a 1-month follow-up. In-game generalization on untrained cards was also at mastery criterion for both

participants at most changeover points, which maintained at the 1-month follow-up for Instructions and Recognition. Although scores on Correction generalization cards were below mastery level, they remained much higher than the baseline mean for both participants at follow-up.

In terms of *in-situ* probes for parent behaviours, delivery of clear instructions increased modestly for Anne from baseline to posttest and she showed some maintenance of skills at follow-up (see Figure 1). There were moderate increases in child compliance for both children in the study (see Figures 1 and 2), as well as meaningful decreases in child noncompliance. These increases may have been due to parents' increased delivery of clear instructions at home. However, because there were no home observations between baseline and posttest, *in-situ* generalization data should be treated with caution.

Hypotheses regarding changes in parental stress, parental self-efficacy and perceived child problem behaviours were partially supported. Melissa's total stress score on the PSI-SF decreased to levels below the clinical threshold after completing Family Game training, whereas Anne's stress scores remained high at posttest. Parental self-efficacy related to behaviour management strategies on the CBMS showed a clear increase for both parents at posttest, particularly on items regarding perceived effectiveness in preventing the problem behaviour and teaching the child a better way of behaving (see Tables 5-6). Anne also had a significantly improved rating on the Efficacy subscale of the PSOC after The Family Game training (see Table 7). General parental self-efficacy for both parents in the study was lower compared to a normative (nonclinical) sample (mean rating of 4.33; Gilmore & Cuskelly, 2009). It is important to note the complexity of items on the PSOC for parents with LD, as they expressed confusion with certain statements. It may have been beneficial to include a measure of comprehension for this rating scale or to adapt it to a simpler version for parents with LD. Moreover, it is likely that

the CBMS subscale was more sensitive to changes in parental self-efficacy specific to improving child compliance as it was directly related to the intervention. This indicates that after The Family Game training, both parents felt more confident in stopping noncompliance, preventing noncompliance and teaching more appropriate compliance, even though these changes may not be reflected in a measure of overall parental competence (i.e., the PSOC).

Both parents indicated a clinically significant change in perceived oppositional behaviour and noncompliance on the Child Behaviour Rating subscale of the CBMS. Anne, in particular, showed multiple positive changes on the CBMS, as the number of total problem behaviours she perceived (i.e., behaviours scored at 5 or above on the CBMS) in her son at the end of the intervention was 12 less behaviours compared to pretest. Melissa's perceived total number of child problem behaviours did not decrease (possibly due to a low baseline number of problem behaviours). The changes in the pre-post standardized measures should be interpreted cautiously as they were not subjected to an experimental design.

Parents also provided very high scores on the Consumer Satisfaction Questionnaire (see Table 8), indicating that they enjoyed playing The Family Game and felt like it helped them learn better parenting skills as well as helped them manage their children's behaviour more effectively. Both parents were highly satisfied with the intervention as indicated through the positive statements to the third-party rater who completed the questionnaire with parents. This indicates high social validity for the Family Game and addresses an important research gap, as very few parent training studies with parents with LD have included measures of social validity (Wade et al., 2008).

There was considerable variability in the scores that may be partly explained by the percentage calculations, which were generally sensitive to the number of cards in a certain session. The number of generalization cards was usually low compared to training cards,

resulting in fluctuating totals (e.g., if the denominator was as low as 4, then even answering 3 out of 4 questions correctly would result in 75%, in comparison to 4 out of 5, which would calculate to 80%). A common problem noted in both participants in Correction training was that they often had to be reminded to give a warning before removing tokens or a privilege. This may have resulted in lower scores on generalization cards in the game. Moreover, scores for generalization cards were high in baseline for some categories even though all cards (generalization cards as well as training cards) were randomly selected from a pool of cards. It was difficult to determine the parents' experience or skill for a particular card prior to baseline as all cards were subjected to chance.

There are also several reasons for the low *in-situ* generalization as indicated by the home observation data. First, despite repeated practice in the game and asking parents to remember to provide a warning if the child does not follow an instruction, it cannot be assumed that parents will actively use the skills learned in the training at home with their children even if they verbally express that they will use the skills. Home observations indicated that participants sometimes praised their children when they were displaying inappropriate behaviour at the same time as following an instruction (e.g., stomping up and down the stairs while cleaning bedroom), resulting in low Recognition scores at home. Also, both participants tended to repeat instructions too many times without correcting for noncompliance, which resulted in low Correction scores at home. Second, reactivity effects may be in effect for both the parent and the child when being directly observed at home (Repp, Nieminen, Olinger & Brusca, 1988) due to the presence of an observer. Several pre-visits to reduce the novelty of being observed may have led to more representative child behaviour. Future studies with parents with LD should include more frequent home observations so that generalization of parenting skills, or lack thereof, can be

determined earlier in the intervention and adjustments can be made to further promote generalization (see below).

Contributions to the Literature

This is one of the first studies to evaluate a parent training program intended for improving behaviour problems and child compliance in older children (over 2 years old) of parents with LD. Although Mildon et al. (2008) included a child behaviour management component in their parent education program for parents with LD who had children aged 3 to 6 years, direct observation data of child behaviours were not included. This study also focused on programming for generalization of parenting skills from the training setting to the naturalistic environment (Feldman et al., 1989).

The present study extends previous research showing that a home-based, skill-oriented parenting intervention is effective in teaching parents with LD new parenting skills (Feldman, 1994; Wade et al. 2008). This study fills the research gap in measuring collateral effects of parenting interventions (e.g., parental stress and parental self-efficacy) as well as social validity ratings (consumer satisfaction), which have been limited in past research (Feldman, 1994; Wade et al. 2008). In addition, this study incorporates previously successful strategies for teaching parents with LD (e.g., modeling, practice, verbal reinforcement, corrective feedback) as well as provides some evidence that parent education delivered in an innovative training format (i.e., a board game) can be a viable alternative to intensive home training. This format has previously been used successfully to teach adults with learning difficulties about health knowledge and health rights by incorporating roleplay scenarios (Feldman et al., 2012).

Programming for generalization. This study programmed for generalization in multiple ways using strategies such as sufficient exemplars, common stimuli, train loosely and mediated generalization, as recommended by Stokes and Baer (1977). First, numerous exemplars were

used in the form of the game cards. To make the scenarios as relevant as possible we used “common stimuli”, by having the game cards recreate scenarios based on parents' individual home situations as determined through discussions with the parents and baseline observations. Scenarios were constantly reviewed for relevance and breadth, and new game cards were created to address new problems in the home environment. For example, Anne's son began stay home from school at a point during the intervention and she experienced difficulties in re-establishing his bedtime routine due to his inconsistent school schedule. New game cards were made for Anne to practice difficulties emerging as a result of the routine change.

We also “trained loosely” (Stokes & Baer, 1977) by varying non-crucial aspects of training, such as scenarios about giving instructions at bedtime vs. lunchtime. The trainers also adjusted their feedback based on the parents' responses and reactions during training. For example, Melissa felt awkward and embarrassed praising her daughter for compliance because she was a teenager. As a result, we provided developmentally appropriate alternatives (e.g., saying "thank you for helping me with the dishes" or "I appreciate your help with the laundry") to help her feel more comfortable but still enable use of the skill of Recognition in the form of approval. Moreover, we attempted to mediate generalization to the home environment by providing Anne with reminder posters of key points in each skill area, although this should have been done with both participants. Although in-game generalization was demonstrated in this study, the aforementioned strategies may not have been sufficient for *in-situ* generalization. Suggestions to further improve generalization are discussed below.

Limitations of the Study

Although this study addressed limitations of previous studies by assessing *in-situ* generalization as well as including measures of parental stress, self-efficacy and social validity, it presents several limitations that influence the interpretability of the present findings. First, the

sample size is too small to generalize findings to other parents with LD. Indeed, this population is notoriously difficult to recruit for participation in research studies and most training studies have small samples (Munford, Sanders, Veitch, & Conder, 2008). Often, participating parents are connected to researchers through community partnerships, which means they are already receiving a variety of services and may be hesitant to become involved in new programs. Moreover, it can be challenging to obtain noncoerced consent if families are involved with child protection agencies and either feel there is an obligation to participate or are wary of any new “workers.” This is why the informed consent procedure was highly regulated in the present study; three other parents who agreed to attend consent meetings chose not to participate.

A second limitation was the lack of more frequent *in-situ* probes to ensure that generalization to the home setting was occurring relative to increase in percentage correct scored within the game. Due to the availability of probe data only at baseline, posttest and follow-up, it is difficult to determine whether changes in parent and child behaviours from baseline to posttest were due to the training or other intervening variables, such as Anne's son receiving mental health services at the 1-month follow-up.

A third limitation of this study is the brief follow-up period. Although maintenance is demonstrated in the training setting for training cards as well as generalization cards, maintenance of Instructions at home (the only skill to show *in-situ* improvement) remains questionable. Moreover, maintenance of positive changes in child compliance is low. A longer follow-up period is needed to determine whether parenting skills and positive child behaviours maintain over a longer time period.

A fourth limitation of the study is the lack of consistency in some teaching strategies used for participants. Only Anne was provided with reminder posters to remember important points for each skill category within the game. This should have been done for both participants in the

study to address common short-term and working memory problems experienced by adults with LD (Numminen, Service, & Ruoppila, 2002). A procedural integrity measure would also help ensure that both trainers were following the same procedure during every training session and well as providing the same learning materials to all participants. Future studies should include measures of procedural integrity.

A fifth limitation of this study is the lack of an experimental design to evaluate the statistical significance of scores on standardized measures of parental stress, parental self-efficacy and perceived child behaviour problems. This could not be done due to the small sample size in the present study. Future studies should use experimental designs such as randomized control trials to determine the significance of pre-post changes in measures of collateral effects of parent training in larger sample sizes.

A sixth limitation is that families headed by parents with LD are often receiving a number of services in the community and have several workers involved in their lives at the same time as receiving parent training (Wade et al., 2008). The case was no different for the parents in this study, particularly Anne, who was receiving Adult Protective Service Worker (APSW) services and, in the last month of training, mental health support for her son. Melissa's daughter was in a special education classroom at school as she had a diagnosed developmental disability and she was involved in social groups and other community activities. However, neither parent received other parent training during this study. Nonetheless, it is difficult to determine which of these variables may have influenced child behaviours at posttest and follow-up and they need to be investigated more closely. Future studies should further establish interval validity of the intervention by measuring whether the intervention is responsible for positive changes not only in parent behaviours but also child behaviours.

A seventh limitation of the study pertains to the variability in number of instructions parents delivered during *in-situ* home observations. Similar to percentage fluctuations due to the total number of cards drawn within the game, the rate of child compliance or noncompliance as well as parent behaviours (i.e., correct praise or correct correction) may have been affected by the number of opportunities presented to engage in the given behaviours. Some observations had a high number of instructions being given while others had a low number of instructions being given, in turn affecting all other parent and child behaviours.

Lastly, the IOA for incorrect instructions was a little lower than the minimum acceptable standard of 80%. This may have been due to difficulty in determining what could be considered an instruction to the child, particularly for older children, with whom there is more subtle parent-child interaction (e.g., talking about school, upcoming classes and exams) than with younger children. This limitation should be addressed in future studies by providing second observers with a more discreet definition of what statements could be considered instructions.

Implications for Practice

Although much further research is needed to establish empirical support, the present study is an encouraging step toward adopting empirically validated parent training programs to improve behaviour problems in older children of parents with learning difficulties. The Family Game provides a way to tailor the intervention to fit each family's situation and work on relevant parenting difficulties experienced in each family context (Clayton, Chester, Mildon & Matthews, 2008; Wade et al., 2008). Although goodness-of-fit was not measured like in Mildon et al. (2008), parents played a crucial role in determining how the training was designed to be relevant to each family. Hieneman and Dunlap (2001) stressed the importance of "buy-in with the intervention" as a perceived influencing factor in determining the effectiveness of a training

program. This was also stated by Mildon et al. (2008) as willingness to participate may increase the likelihood of the intervention being effective in improving parenting skills.

The Family Game presents potential for a viable alternative to intensive *in-situ* parent training programs, where older child reactivity may make it uncomfortable and difficult to teach the parent new skills. While the challenges of in-home generalization still need to be tackled, The Family Game is enjoyed by the participants and it allows practitioners to adapt the intervention to meet the learning needs of parents with LD and work at their pace. Empirically supported behavioural teaching strategies such as modeling, roleplaying, verbal reinforcement and corrective feedback used in this training format increase the likelihood that parents will learn how to perform a skill (i.e., performance-based learning rather than knowledge-based).

The Family Game is also simple to learn and implement, which makes practitioner training and intervention delivery less resource-intensive (addressing concerns of Tymchuk & Andron, 1988). Moreover, the intervention is amenable to being adapted for a wide range of professionals, including family support workers who work with families involved with child protection agencies. Parents may be more motivated to participate in an intervention that is enjoyable (as noted in the high social validity ratings in this study) and less stressful than intensive training. This program presents a feasible alternative to court-mandated general parenting programs that parents are required to take because it is more tailored for individual families. Moreover, if even improving only clear instructions leads to positive changes in child compliance, this intervention may be used as a preventative intervention for parents so that problem behaviour management is less of a concern.

The results in this study indicate strong in-game generalization at the very least, which would enable practitioners to program for generalization within training by incorporating sufficient exemplars and other generalization strategies (Stokes & Baer, 1977). However,

ongoing assessment and monitoring is important to ensure that parent responses to game scenarios do not become rote and parents are able to apply skills learned in training cards to several different situations that they struggle with at home, even if not all situations have been trained.

Recommendations to Improve the Family Game

Although some limitations of the intervention design were addressed within this study, such as providing one of the participants with visual prompts to remember key points about each skill and enhancing potential for generalization by incorporating some generalization strategies, the training program can be improved in several ways. First, The Family Game curriculum could be divided into younger and older age groups, so that practitioners can determine parenting scenarios that are more relevant to the families they are supporting. The present study showed that the program can be effective for children up to 14 years old with behaviour problems. However, it is important to note that in order to individualize the intervention, the game scenarios will constantly need to be replenished, so that practitioners can address the dynamic parenting needs of each participant.

In the present study, a response cost procedure was suggested to parents to correct child noncompliance (in addition to praise and reinforcement for child compliance). The aim was to utilize a strategy that was already being used by parents, was evidence-based (Bender & Mathes, 1995; Little & Kelley, 1989; Truchlicka, et al., 1998), and built on the parents' previous parenting experience. Prior to the intervention, parents were using response cost incorrectly. For example, the punishment was disproportionate to the child's behaviours (e.g., removing too many privileges or removing privileges for too long for minor transgressions); thus, they were trained on how to use response cost appropriately. For future implementation of The Family Game, it is recommended that practitioners use not only evidence-based but functionally-equivalent methods

for correcting child noncompliance. For this purpose, functional behavioural assessments including indirect measures (e.g., informant questionnaires such as the Functional Assessment Screening Tool; FAST; The Florida Centre on Self-Injury, 2002), as well as descriptive functional analyses (Cipani & Schock, 2011) could be used to determine the optimal correction method. Although formal functional behavioural assessments were not conducted in the present study, participants revealed in the pretest interviews that child noncompliance commonly resulted in escape from demands. Response cost procedures have previously been used to successfully treat noncompliance (Little & Kelley, 1989) as well as other escape-maintained problem behaviours (Keeney, Fisher, Adelinis, & Wilder, 2000).

In order to implement the intervention more consistently, it is recommended that practitioners use a procedural integrity checklist that includes steps to be covered in each training session. This will ensure consistent review of skills as well as help practitioners organize the card deck in a way that parents are able to draw enough cards from each skill category so that the percentage correct calculated for game sessions can be meaningfully plotted on a graph.

An important aspect of The Family Game that was not included in this study but should be evaluated in further studies is tangible reinforcement for parental correct performance in the form of tokens that can be cashed in for backup reinforcers (Feldman et al., 1989). This may not only lead to more rapid acquisition of parenting skills within the training setting, but also improve attendance at training sessions and reduce the number of times participants reschedule appointments. More frequent meetings may also be beneficial for parents with LD, so that they receive practice on new skills more often.

Suggestions to enhance generalization. Although we attempted to program for generalization in this study (as described above), strategies for further enhancement of generalization can be employed. In this study, parents were given the choice of bringing a picture

of their child to roleplay with during the game (programming common stimuli; Stokes & Baer, 1977), but neither parent opted to do this. It may have improved likelihood of generalization if the picture had been a mandatory part of training. Moreover, pictures may have helped parents engage in a more involved roleplay, which was sometimes lacking when playing the game with the trainers. Parents often had to be reminded to act out the answers (rather than saying "I would tell my child to...").

Another way of programming common stimuli would be to incorporate video feedback of home observations into The Family Game sessions, so that parents are able to see the naturalistic setting within the training sessions. This may make the transfer of skills from the training setting to the home environment easier because parents will have experienced both in close association with each other.

More frequent home observations will allow practitioners to assess whether or not generalization of parenting skills is occurring to the home setting. This also means that if parents are not using the skills at home, they could be instructed to generalize (i.e., told to use the skills from the game at home with their children – cf., Feldman et al., 1989). Giving examples of the home observations during discussion in game sessions will also help to relate the training setting to the home setting.

Since The Family Game is meant to be a client-centered intervention, a useful strategy for improving generalization could be to mediate generalization by teaching self-management techniques. For example, parents could be asked to keep a simple checklist at home in which they could record whether or not they praised their child for following instructions, such as cleaning the bedroom as soon as the child was asked. To further make use of this strategy, parents could be "trained to generalize" (Stokes & Baer, 1977) by setting a criterion for the number of check marks needed every week. Parents could be provided tangible reinforcement for

correct answers to new and untrained questions within the game setting, as well as for having collected the required number of check marks (as described in the example above) every week.

Future Research

Due to the dearth of literature on ameliorating the risk of behaviour problems in older children of parents with LD as well as the lack of evidence-based programs, there is a great need for further research to investigate how parents with LD can be taught to better manage their children's behaviour and improve child compliance. Future studies should address the methodological limitations of this study outlined above and further evaluate the efficacy of The Family Game training program in a controlled setting with a larger sample size. Moreover, further research should be conducted to assess the second component of The Family Game (rapport training) in conjunction with cooperation training to evaluate the efficacy of the full program.

Some results in this study were difficult to interpret because of the lack of normative data available for comparison. For instance, it was difficult to determine what a significant change in rate of praise would have been for participants in this study because of the lack of data on how often typical parents praise older children for compliance. No research could be found in the parenting training literature that reported typical frequency of parental praise for compliance in older children. Most studies that have looked at praise in parents with LD (Feldman et al. 1986; Feldman et al., 1993) focused on praising infants, toddlers or children under the age of 3 years, making it difficult to compare rates of praise for older children. Future studies should include normative data for comparison showing how often typical parents of older children use correct instructions and praise statements.

Additional research should be conducted on the collateral effects of parent education programs on parents with learning difficulties, such as parental stress, parental self-efficacy and

perception of child behaviour problems. Although the present study showed some changes in parental stress and parental self-efficacy, more research is needed for conclusive results as this area continues to be limited (Feldman, 1994; Wade et al., 2008). The influence of other variables such as "willingness to participate" and "goodness of fit" (Mildon et al., 2008) also needs to be more closely examined in regard to the effectiveness of parenting interventions.

Additional research is also needed to evaluate the suggested strategies for enhanced generalization (as described above). In any parenting training program, it is important to assess transfer of parent skills from the training setting to the family home setting on a continuous and frequent basis. This would be crucial in ensuring that parents are actually using the skills learned in the intervention at home with their children. However, frequent home visits may be intrusive and not feasible.

Future research should also control for the effects of confounding variables such as the variability in the total number of instructions given by parents during home observations. Parents could be told to deliver a predetermined number of instructions in each home observation whenever possible, so that improvements can be assessed in a more controlled manner. However, this may be a challenge with older children, for whom instructions may be more complex and require more time, which may not be available during a particular observation period. Parents could be asked at the end of each game training session to arrange for a specific number of instructions to give to their child for a home observation to be conducted at a later point, depending on the age of the child.

Although The Family Game was implemented individually for each parent in her home, future studies should examine the potential for this intervention to be delivered in a centre-based group format. This would reduce the amount of resources needed for home intervention;

however, enhanced generalization strategies would become imperative in such a setting to ensure that parents are able to use newly learned parenting skills at home.

General research on parents with LD. Further research could also be conducted on difficulties in research involvement with this population of parents (Munford et al., 2008). As shown in this study, recruitment is a tremendous obstacle that needs to be addressed for continued research in this field. Moreover, because parents with LD are often involved in numerous other services (e.g., APSW) while receiving parent training, future studies should attempt to control for, or at least take into account, possible therapeutic effects of other services.

There is also a paucity of studies that include child outcome data. Future studies could not only measure the "raison d'etre for parent training" (Wade et al., 2008, p. 362) but also include measures on collateral effects on older children, such as academic performance and educational goals. Some research has been conducted on expectations that parents with LD have in regard to their children's educational attainment showing that children of parents with LD completed fewer years of school compared to children of parents without LD (Taylor, Hurd, Seltzer, Greenberg, & Floyd, 2010). Parental expectation was found to be the strongest predictor of child educational attainment (Taylor, et al., 2010). However, there has been no investigation of how parenting intervention could be related to changes in expectations of educational attainment. Longitudinal studies or at least longer follow-up periods would be valuable in determining the long-term benefits of parenting interventions on children of parents with LD.

Conclusion

The present study represents a first effort at addressing risk of behaviour problems in older children of parents with LD. The study provides early evidence that The Family Game parent training program improves roleplayed performance of parenting skills such as delivering clear instructions, praising child compliance and correcting child noncompliance. Due to the

small number of participants and variability of the data, it is important to further evaluate The Family Game in a more controlled study with a larger sample size. If empirical support can be established for The Family Game, it would provide an accessible, easy-to-implement parenting program that can be adopted by various family service agencies as a viable alternative to intensive *in-situ* parent training for parents with LD. It would also provide a tailored alternative for parents with LD to general parenting programs offered by child protection agencies that may be court-mandated. This intervention would allow practitioners to address the specific learning needs of parents with LD and show actual improvements in both parent and child behaviours.

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Appendix A

Informed Consent**Title of Study:**

Effectiveness of A Parent Education Intervention to Reduce the Risk of Behaviour Problems in Children of Parents with Learning Difficulties

Researchers:**Prof. Maurice Feldman, Ph.D., C.Psych., BCBA-D**

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Name of Participant: (Please print)

WHAT THE STUDY IS ABOUT

We are asking you to be part of a research study. We (the researchers) want to find out how parents can learn new skills as parents. We want to find out what works best for teaching your child how to listen to you when you ask your child to do something.

Q1): What do the researchers want to find out?

WHAT WILL HAPPEN IN THE STUDY

We will hold parent training sessions in which we will play a game called "The Family Game." You will play the game on a game board with the researchers and maybe with your partner. You will act out different possible situations that could happen at home with your children. The training may take place in your home.

Q2): What is the name of the game we will be playing?

In the Family Game, we will teach you how to give clear instructions to your children. We will also teach you how to praise your child when your child listens to you (follows your instruction). We will show you what you may do if your children does not listen when you tell them to do something.

Q3): What is one of the three skills we will teach you in the Family Game?

Parent training sessions, in which we play the game, will take about one to two hours and sessions will be held up to three times per week. The number of times per week is up to you. There could be about 30 sessions in total, which will take between 10 and 30 weeks, depending on how many visits take place each week.

Q4): How many training sessions could there be?

WHAT WILL HAPPEN IN THE TRAINING

You will play the Family Game by rolling a die and move your chosen playing piece around the game board. You will be playing with the trainer. When you land on a "take a card" space, the trainer will read what's written on the game card out loud and you will be asked a question about what you would do or say to your child in that situation. For example, the game card might say: *Your child runs away from you while you are walking to the park with him. What could you do?* You would then tell the trainer what you would say or do by acting it out just as if the situation really happened with your own child. This is called role-playing and is just like pretending or acting. In the game, the trainer will also take a turn and act out a situation on a game card.

Q5): What will you do when the trainer reads you a question from a game card?

Sometimes, parents get very angry at their children when they don't listen to their parents. We will teach you how to control your anger at times like these. We will teach you how to do this during the training sessions when we play the game. It will also be taught by roleplaying or acting it out.

Q6): How will we teach you to control your anger toward your children?

HOME OBSERVATIONS

Besides the game, but as part of the training, up to 2 researchers (who may be the trainer and/or someone else) will come to your home for about one hour to watch some of your daily home routines with your children. The researcher may ask you to do something with your child such as play a game or ask him to pick up his toys. The reason for the observations is to see if you are using skills you learned in the Family Game with your child at home.

Q7): What is the reason for observations by the researcher?

The observations will be done at a different time than the game, such as at your child's mealtime, playtime or bedtime. The researchers will come at least once a week to do an observation for about one hour. You can cancel the appointments at any time if you do not want to have an observation done by sending an e-mail or calling the trainer.

Q8): What can you do if you don't want the trainer to come for the observation?

When the trainer comes to your home to observe, she may not answer any questions you have about parenting during the observation. The reason for this is because we want to find out how much you can learn about parenting just from playing the game. By playing the Family Game, you may learn the answers to your questions. When the study is over and you are done playing the game for the last time, the trainer will answer your questions as best as she can.

Q9): Will the trainer answer my questions during the observation?

FAMILY INFORMATION

Q10). Before the study starts, we will ask you some questions about your family, such as what kind of services you have received in the past, whether in school or elsewhere. Your name will never be used when talking about this information with other people.

At the start and end of the study, a researcher will ask you questions about the kinds of problems at home you have trouble dealing with, and what makes you most worried about your child's behaviour. The researcher may also ask you what you want to change the most about your child's behaviour and about your own way of parenting. This information will help the trainer plan the game in a better way and see if the training helped you. Before and after the study, a researcher will ask you about how confident you feel about being a parent.

Q10): What will the trainer ask you about your child's behaviour?

At the end of the study, a researcher who is not the trainer will ask you how much you liked the training and how it can be improved. We value your opinion to help us know if we should do the Family Game with other parents and your suggestions about how we can make it even better.

Q11): Why do we want to know how you felt about the Family Game?

DATA COLLECTION

We would like to take videos of you playing the game and of the observations we will do with you and your child at home. Having videos is very helpful for the study. The reason the videos of you playing the game are helpful is so that we can score your answers during the game more accurately by watching the game session on video. Sometimes it is difficult for the trainer to play the game and keep score.

Q12): Why are videos of you playing the game helpful?

We would also like to video the observations of you and your child. Videos of these observations are very helpful for the researchers so that we can count how many times you use the skills you are learning in the game and how your child behaves.

Q13): Why are videos of the observations of you and your child helpful?

Nobody will ever see the videos except the researchers. If you like, we can give you a copy of the videos. Once we do not need videos anymore for research, we will delete all of your videos. If you would prefer not to have videos made, you can still be in the study. However, we may need to have a second person attend the games to help the trainer keep a record of the scores.

Q14): Will anyone see the videos apart from the researchers?

Q15): Can you still be in the study if you do not want videos to be taken?

You will not be paid money for this training. You do not have to pay money to learn better parenting skills through these training sessions.

Q16): Will you be paid money to do the training?

Q17): Will you have to pay any money to do the training?

WHO WILL SEE YOUR INFORMATION

Only people on the research team, including those listed on this form, will see your personal information and videos. All personal information will be kept in a locked filing cabinet in a locked office. If the information is on a computer, it will be protected by a password so that only the researchers can see your file. Summaries of your results will not have your name, but instead the researchers will use a code such as 001.

Q17): What is one way the researchers will protect your personal information?

General information from this training will be shared with other people, so they can find out if the Family Game can be used to for parent training with other families. We may give a talk at a meeting or write up a paper that would be published in a journal or a book. When people from the research team share this information they will never use your real name. We will make up a false name to call you. For example, if your name is Linda Smith, we may say that "Jennifer did well in the Family Game training." We will not say "Linda did well with the role-plays in class".

Q18): Will your real name ever be said or written when people from the training team share your information?

As said before, we will not share your personal information with anyone who is not on the research team. However, due to the law in Ontario, we must report any child abuse to the Children's Aid Society.

VOLUNTEERING TO PARTICIPATE

Your participation in this training is voluntary. That means it is totally your choice if you participate in the study or not. If you choose not to participate, nothing bad will happen to you and your family. The researchers' feelings will not be hurt if you choose not to participate. If you do agree to be part of the study, you don't have to answer any questions that you don't want to and you can stop being a part of the parent training at any time without anything bad happening to you and your family. Any services and supports your family gets will not change if you decide not to be part of this study. Nobody will be upset with you if you don't answer a question or choose to stop participating in this study at any time.

Q19): What would you say to us if you wanted to stop being part of the Family Game study?

Q20): Will anything bad happen to you if you decide you don't want to be a part of this training?

If you decide to participate in this study, you will not have to do anything that will be harmful for you and your family. To our knowledge, there are no risks involved in this training program. If you feel embarrassed about people on the research team knowing about your parenting skills, we can refer you for counselling services available in your area.

Q21): What can you do if you feel embarrassed about your parenting needs?

BENEFITS AND RISKS

One of the benefits of being part of this parent training study is that it may help you learn how to give better instructions to your child, how to praise your child and what to do if your child does not listen to you. Another benefit of your part in this study would be that you would be helping other people interested in parenting skills learn better ways of teaching parenting skills.

Q22): What is one benefit of being a part of this study?

The trainers will give you the results of the study after it is over. If you have any questions or concerns about your participation in the study, you may contact Munazza Tahir at 905-688-5550 ext. 5121, mt11lq@brocku.ca, or Maurice Feldman at 905-688-5550 ext. 4894, mfeldman@brocku.ca. You may also contact the Brock University Research Ethics Officer in the Office of Research Services at 905-688-5550 ext. 3035, email: reb@brocku.ca.

I agree:

- | | YES | NO |
|---|--------------------------|--------------------------|
| • to be a part of a research training program that is teaching different parenting skills using a game format | <input type="checkbox"/> | <input type="checkbox"/> |
| • to be videoed during the family game | <input type="checkbox"/> | <input type="checkbox"/> |
| • to be videoed during the home observations | <input type="checkbox"/> | <input type="checkbox"/> |
| • to be asked questions about my family | <input type="checkbox"/> | <input type="checkbox"/> |
| • that the researchers can ask me questions about what problems I have at home with my children, how I parent, how confident I feel as a parent and what I thought about the training | <input type="checkbox"/> | <input type="checkbox"/> |
| • that people on the research team can see a copy of this signed consent form | <input type="checkbox"/> | <input type="checkbox"/> |
| • that the information from the training research can be used in different ways in other research projects to help improve other people's parenting skills | <input type="checkbox"/> | <input type="checkbox"/> |
| • to be contacted in the future about participating in other studies like this one (only giving permission to be contacted, not to participate in a new study) | <input type="checkbox"/> | <input type="checkbox"/> |

Participant Signature: _____

Participant Name: (please print) _____

Date: _____

Witness: I _____ have been asked by _____ (name of parent) to witness this consent process.

In my opinion, the parent understands what the study is about and his/her involvement in it. I also attest that the parent was not coerced to participate in the study.

Witness signature

Witness name

Relationship to parent

Date

Research code no.: _____

Appendix B



Debriefing Letter

Thank you very much for taking part in this research study about parent training. This letter will tell you about what we found after we did the study. Many researchers who studied this topic in the past have found that if some parents do not get extra support to learn better parenting skills, their children may have behaviour problems. Because there are not many programs right now that support parents in this way, we were interested in starting such a program.

[Here we will describe to the parents what the results of the study were in simple language. We will read this letter to them and answer any questions they may have.]

The purpose of the study was to find out how parents can learn new skills as parents. We want to find out what works best for teaching your child how to listen to you when you ask your child to do something.

Once again, we are very grateful for your participation in this study. You have helped us and many other researchers learn better ways of teaching parents important skills to use at home and positive ways to manage child behaviour problems.

If you have any questions or issues you want to talk about, you are welcome to contact us:

Munazza Tahir
Student Principal Investigator
(905) 688-5550 ext. 5121
mt11lq@brocku.ca

Dr. Maurice Feldman
Faculty Supervisor
(905) 688-5550 ext. 4894
mfeldman@brocku.ca

Appendix C



Research Information Letter

Title of Study: Effectiveness of A Parent Education Intervention to Reduce the Risk of Behaviour Problems in Children of Parents with Learning Difficulties

Principal Investigator: Dr. Maurice Feldman, Professor and Graduate Program Director, Centre of Applied Disability Studies, Brock University

Student Principal Investigator: Munazza Tahir, Centre of Applied Disability Studies, Brock University

We are conducting a research study about the effectiveness of a parental training program to reduce the risk of behaviour problems in children of parents with learning difficulties. This study represents the Master's thesis for Munazza Tahir, an MA student in Applied Disability Studies at Brock University, supervised by Prof. Maurice Feldman. We humbly request that you extend this information to parents with learning difficulties supported by your agency or meet the following criteria: (a) eligibility for Ontario Disability Support Program (ODSP) for intellectual disability, (b) parental history of special education, (c) worker or self-report of learning difficulties or (d) previous or recent cognitive testing indicating an IQ < 80, as well as having a child between the ages of 2 and 10. We request that you inform eligible parents about the study verbally, over the phone or in person, through their support worker or a family member or significant other who is in the parents' support network. We will subsequently request a meeting to discuss this research with interested parents through their support workers or significant others.

The purpose of this research project is evaluate how effective a positive-based behavioural intervention in game format is for increasing proactive parenting strategies and in turn leading to better management of noncompliance from children and other child behaviour problems. Should parents choose to participate, they will first be asked for informed consent in the presence of someone they can trust. Informed consent will be attained by arranging a meeting with the parents which they will attend with someone they trust and each section of the consent form will be verbally communicated to the parents. Although the parents' trusted person will remain neutral throughout the meeting, if the parents ask his or her opinion at the end, they will be free to do so. The trusted person will also provide his or her opinion about the informed consent being noncoerced as part of the consent procedure with the parents. Upon agreement, parents will participate in weekly game sessions in which correct responses to various home routine scenarios will be taught incrementally. Parents will learn by roleplaying their responses with other parents and/or the game facilitators and will be given positive reinforcement and corrective feedback throughout the study.

The expected duration of the study is three months, with one weekly game session and separate sessions for weekly in-home observations, for data collection to track progress. The game sessions as well as naturalistic observations will be done at home with the parents in each family.

This research should potentially benefit parents with learning difficulties in developing better interactional skills with their children. The training curriculum will be individualized for each parent after determining specific problem areas for each family. Moreover, roleplaying, repeated practice, corrective feedback and praise delivered systematically will help parents learn at their own pace. At the end of the study, further training will be offered to any parents who are interested.

In addition to **[name of agency]**, we are attempting to recruit participants from other agencies that support adults or parents with intellectual disabilities. We tremendously appreciate any efforts on your part to help us recruit participants.

If you have any questions or if you would like to arrange for us to meet a family, please feel free to contact us (see below for contact information). Thank you.

Dr. Maurice Feldman
Faculty Supervisor
(905) 688-5550 ext. 4894
mfeldman@brocku.ca

Munazza Tahir
Principal Student Investigator
(905) 688-5550 ext. 5121 or (905) 394-0613
mt11lq@brocku.ca

This study has been reviewed and received ethics clearance through Brock University's Research Ethics Board [insert ethics file number].

If you have any pertinent questions about the rights of research participants, please contact the Brock University Research Ethics Officer (905 688-5550 ext 3035, reb@brocku.ca)

Appendix D

Verbal Assent Script for Children

You are being asked to take part in a study along with your parents. Your parents have given us permission for you to participate in this study. In this study, one or two researchers will sometimes come to your house to watch your home activities, but they won't say anything to you.

When the researchers come, they might have a video camera to record you at home talking or playing with your parents. If you feel like you don't want to be in the video, you can tell us any time.

Nobody will see your videos except for the researchers.

You can also choose to stop at any time if you do not want to be in the study or say no whenever you don't want us to do something.

Do you agree to be part of the study? (Look for a clear yes/no response)

Appendix E.1

Research code no.: _____

DEMOGRAPHICS QUESTIONNAIRE

1. Today's Date (month-day-year): _____
2. Name of Mother (first, last): _____
 Phone Number: _____
 Email: _____
3. Name of Father (first, last): _____
 Phone Number: _____
 Email: _____
4. Who is providing the information on this questionnaire?
 Mother Father Someone Else (specify relationship to
 family) _____

SECONDARY CONTACT INFORMATION:

People who likely would have forwarding information if you moved:

5. Name: _____
 Phone Number: _____
 Email: _____
6. Name: _____
 Phone Number: _____
 Email: _____

PARENT/FAMILY INFORMATION

7. Number of all children and adolescents (up to age 18 yrs) living in the home: _____
8. Number of children removed from the home by child protection agency (FACS, CAS) _____
9. Number of children between the ages of 2 and 10: _____
10. Number of all adults (19 yrs and over) living in the home: _____
11. Location of home (nearest city or town): _____
12. What type of home do you live in? (Circle ONE):

Apartment Townhouse Boarding home Semi-detached Detached
Shelter

13. Do you own or rent a home? (Circle ONE)

Own Rent Neither (specify): _____

14. Present marital status of parents (Circle ONE)

Married Living together Separated Divorced Widowed

15. Have you ever been part of another parent training program?

Yes No Don't Know

If you know which program, please specify the name of the program or the agency:

INFORMATION ABOUT MOTHER

16. Mother's date-of-birth (month-day-year): _____

17. How many years did mother spend in school (including post-secondary):

18. Did the mother have involvement with child protection (FACS, CAS) when she was a child/ adolescent?

Yes No Don't Know

19. Did mother obtain high school diploma? (Circle ONE)

Yes No Don't Know

20. Mother had special education experience when in school. (Circle ONE)

No Yes (specify): _____

21. Does the mother have difficulty with learning? _____

22. Current occupation of mother: _____

23. Mother works (other than as homemaker) (Circle ONE)

Full-time Part-time No

24. Is mother receiving ODSP (disability pension)?

Yes No Don't Know

INFORMATION ABOUT FATHER

25. Father's date-of-birth (month-day-year): _____

26. How many years did father spend in school (including post-secondary):

27. Did the father have involvement with child protection (FACS, CAS) when she was a child/ adolescent?

Yes No Don't Know

28. Did father obtain high school diploma? (Circle ONE)

Yes No Don't Know

29. Father had special education experience when in school. (Circle ONE)

No Yes (*specify*): _____

30. Does the father have difficulty with learning? _____

31. Current occupation of father: _____

32. Father works (other than as homemaker) (Circle ONE)

Full-time Part-time No

33. Is father receiving ODSP (disability pension)?

Yes No Don't Know

INFORMATION ABOUT CHILDREN

34. Name (first, last), age and gender of all your children:

Name: _____	Age: _____	Gender: _____
Name: _____	Age: _____	Gender: _____
Name: _____	Age: _____	Gender: _____
Name: _____	Age: _____	Gender: _____
Name: _____	Age: _____	Gender: _____

35. Are any of your children getting special education services in school?

No Yes

If you circled YES, please specify what kind of special education services for each child:

Name: _____ Service: _____
Name: _____ Service: _____
Name: _____ Service: _____
Name: _____ Service: _____
Name: _____ Service: _____

36. Is any member of the family or the family as a whole receiving other services (e.g., APSW, family support worker, behavior therapist, social worker)?

37. If you circled YES, please specify what kind of special education services for each child:

38. Name of family member: _____ Service: _____

39. Name of family member : _____ Service: _____

40. Name of family member: _____ Service: _____

THANK YOU FOR YOUR INFORMATION!

Appendix E.2

CHILD BEHAVIOR MANAGEMENT SURVEY 3.0

Date (month-day-year): _____

Relationship of informant to the child:

Child's Initials (first, middle, and last name):

Child's date-of birth (month-day-year):

Child's sex: _____

Child's diagnosis (if known):

SECTION I.

Rating of Child Problem Behavior

Below is a list of possible child problem behaviors. A description of each behavior is provided on the pages immediately following this chart. For each behavior, indicate whether you think the behavior is currently a problem. Use the 7-point scale to score the severity of the problem. For example, if the behavior is never a problem at all, then give a score of "1"; if the behavior is sometimes a problem, give a score of "4"; if the behavior is always a problem, give a score of "7". If you wish to add some more information (for example, describing the child's specific actions, please do so on the right side of the chart. You can also add more comments on additional sheets of paper.

Ratings

1=never a problem, 2=rarely a problem, 3=occasionally a problem, 4=sometimes a problem
5=usually a problem, 6=frequently a problem, 7=always a problem

Behavior	Rating of problem							Details
physical aggression	1	2	3	4	5	6	7	
anger	1	2	3	4	5	6	7	
threats	1	2	3	4	5	6	7	
self-injury	1	2	3	4	5	6	7	
stereotypy/self-stimulation	1	2	3	4	5	6	7	
screams	1	2	3	4	5	6	7	

cries	1	2	3	4	5	6	7
--------------	----------	----------	----------	----------	----------	----------	----------

mood swings	1	2	3	4	5	6	7
--------------------	----------	----------	----------	----------	----------	----------	----------

oppositional/noncompliance	1	2	3	4	5	6	7
-----------------------------------	----------	----------	----------	----------	----------	----------	----------

temper tantrums	1	2	3	4	5	6	7
------------------------	----------	----------	----------	----------	----------	----------	----------

property damage	1	2	3	4	5	6	7
------------------------	----------	----------	----------	----------	----------	----------	----------

throwing objects	1	2	3	4	5	6	7
-------------------------	----------	----------	----------	----------	----------	----------	----------

bangs/slams objects/doors	1	2	3	4	5	6	7
----------------------------------	----------	----------	----------	----------	----------	----------	----------

paying attention	1	2	3	4	5	6	7
-------------------------	----------	----------	----------	----------	----------	----------	----------

hyperactive/agitated	1	2	3	4	5	6	7
-----------------------------	----------	----------	----------	----------	----------	----------	----------

impulsive	1	2	3	4	5	6	7
------------------	----------	----------	----------	----------	----------	----------	----------

manners	1	2	3	4	5	6	7
----------------	----------	----------	----------	----------	----------	----------	----------

eating	1	2	3	4	5	6	7
---------------	----------	----------	----------	----------	----------	----------	----------

toileting	1	2	3	4	5	6	7
------------------	----------	----------	----------	----------	----------	----------	----------

dressing	1	2	3	4	5	6	7
-----------------	----------	----------	----------	----------	----------	----------	----------

sleeping	1	2	3	4	5	6	7
-----------------	----------	----------	----------	----------	----------	----------	----------

hygiene	1	2	3	4	5	6	7
----------------	----------	----------	----------	----------	----------	----------	----------

playing/leisure	1	2	3	4	5	6	7
------------------------	----------	----------	----------	----------	----------	----------	----------

transitions	1	2	3	4	5	6	7
--------------------	----------	----------	----------	----------	----------	----------	----------

stealing	1	2	3	4	5	6	7
-----------------	----------	----------	----------	----------	----------	----------	----------

hoarding	1	2	3	4	5	6	7
-----------------	----------	----------	----------	----------	----------	----------	----------

running away	1	2	3	4	5	6	7
---------------------	----------	----------	----------	----------	----------	----------	----------

attention-seeking	1	2	3	4	5	6	7
--------------------------	----------	----------	----------	----------	----------	----------	----------

obsessive thoughts	1	2	3	4	5	6	7
---------------------------	----------	----------	----------	----------	----------	----------	----------

compulsive behaviors	1	2	3	4	5	6	7
-----------------------------	----------	----------	----------	----------	----------	----------	----------

bizarre talk	1	2	3	4	5	6	7
---------------------	----------	----------	----------	----------	----------	----------	----------

self-talk	1	2	3	4	5	6	7
------------------	----------	----------	----------	----------	----------	----------	----------

hallucinations	1	2	3	4	5	6	7
-----------------------	----------	----------	----------	----------	----------	----------	----------

withdrawn/isolated	1	2	3	4	5	6	7
---------------------------	----------	----------	----------	----------	----------	----------	----------

fearful/anxious	1	2	3	4	5	6	7
------------------------	----------	----------	----------	----------	----------	----------	----------

touching others	1	2	3	4	5	6	7
------------------------	----------	----------	----------	----------	----------	----------	----------

touching self	1	2	3	4	5	6	7
----------------------	----------	----------	----------	----------	----------	----------	----------

eating nonedibles	1	2	3	4	5	6	7
--------------------------	----------	----------	----------	----------	----------	----------	----------

behavior in public	1	2	3	4	5	6	7
stripping	1	2	3	4	5	6	7
vomiting	1	2	3	4	5	6	7
rumination	1	2	3	4	5	6	7
other (specify): _____	1	2	3	4	5	6	7
other (specify): _____	1	2	3	4	5	6	7
other (specify): _____	1	2	3	4	5	6	7
other (specify): _____	1	2	3	4	5	6	7

Description of Behaviors

Physical Aggression - attempts to (but is prevented or misses) or actually hits, slaps, punches, bites, pinches, scratches, pokes, kicks, shoves or throws objects at another person with sufficient intensity to inflict or potentially inflict immediate pain and/or injury to the victim.

Anger - directs rage, yells, at another person, animal, or object

Threats - verbally or nonverbally (e.g., raises fist) threatens to harm another person; does not have to be angry at the time.

Self-injury - attempts to (but is blocked) or actually hits, slaps, punches, bites, pinches, scratches, pokes, kicks own body or nonaccidentally brings body part in contact with hard object with sufficient intensity to cause immediate or accumulated injury.

Stereotypy/self-stimulation - nonfunctional repetitive asocial behavior (e.g., rocking, finger flicking, headweaving, spinning objects, twirling self, constant touching).

Screams - shouts out in a very loud voice.

Cries - emotionally upset with tears in eyes.

Mood swings - unpredictable, quick changes in emotional state from one extreme to the other (e.g., from happy to sad; agitated to calm).

Oppositional/noncompliance - does not follow instructions or rules.

Temper tantrums - stomps feet, falls to floor, thrashes about.

Property damage - purposely attempts to, or actually breaks an object

Throwing objects - tosses, pitches, propels objects that are not supposed to be thrown (e.g., throws food on the floor).

Bangs/slams objects/doors - pushes, kicks, hits an object/door with sufficient force to be make a loud sound and/or cause it to move.

Paying attention - looking at person who is speaking to him/her.

Hyperactive/agitated - constantly in motion.

Impulsive - reacts immediately without thinking.

Manners - acts socially appropriately; is polite; shares; waits turn.

Eating - eats most foods given to him/her; good table manners.

Toileting - eliminates in toilet or potty; does not have accidents during the day or at night.

Dressing - cooperates with dressing routine or dresses self with or without assistance

Sleeping - cooperates with bedtime routine; sleeps in own bed throughout the night; wakes up at a reasonable time in the morning; not difficult to get out of bed in the morning.

Hygiene- cooperates with washing, bathing, and toothbrushing routines; keeps self reasonably clean.

Playing/leisure - uses toys the way in which they were designed; can keep self occupied playing with toys, games, pretend, watching TV or videos, listening to music; plays cooperatively with others.

Transitions - does not get upset when there is a change (e.g., going from one place to another; changing activities; going away; visitors).

Stealing - takes others' possessions without their permission.

Hoarding - stores a lot of objects; will not let things be thrown out.

Running away - runs in situations which may be dangerous or socially inappropriate (e.g., into the street, in the store); attempts to leave house, daycare, etc.

Attention-seeking - craves attention of others; won't leave your side; pull at you to get your attention; acts silly to get attention.

Obsessive thoughts - dwells on and talks about the same themes over and over again (e.g., the weather, Christmas).

Compulsive behaviors - rituals; doing the same things over and over again (e.g., lining up objects; washing hands excessively; gets very upset if things are not in their place.

Bizarre talk - talks outloud about strange topics.

Self-talk - other than during pretend play, talks, mumbles, or whispers when alone, or to no one in particular.

Hallucinations - other than during pretend play, acts as if something is happening that is not.

Withdrawn/isolated - keeps to him/herself; does not like to be around other people; shy; in own world.

Fearful/anxious - afraid of, runs away from, harmless situations; shivers; expresses fear; panics.

Touching others - inappropriate and/or too frequent touching of others.

Touching self - inappropriate and/or too frequent touching of self.

Eating nonedibles - putting nonnutritive substances in mouth (e.g., grass, twigs, cigarettes, pens).

Behavior in public - embarrassing behavior in public places or in front of others; difficult to control in public places.

Stripping - takes off clothing at inappropriate times.

Vomiting - throws up food but is not sick.

Rumination - brings up already swallowed food into mouth and re-eats it.

SECTION II.

Parent Child Behavior Management Strategies

Please fill-out this section for a behavior in Section I that is the most problematic (i.e., had the highest score). If more than one behaviour had the same high score, then pick one that occurs most frequently.

In this section, we want you to write out, in your own words, what you usually do to handle your child's problem behavior.

My child's most problematic behavior: _____

How I handle this problem: _____

Using a scale of 1 to 7:

a. Rate the effectiveness of this approach.

1	2	3	4	5	6	7
not effective		moderately effective				very effective

b. Rate the effectiveness of this approach in stopping the problem behavior when it does occur.

1	2	3	4	5	6	7
not effective		moderately effective				very effective

c. Rate the effectiveness of this approach in preventing the problem behavior from occurring again.

1	2	3	4	5	6	7
not effective		moderately effective				very effective

d. Rate the effectiveness of this approach in teaching the child a better way of behaving.

1	2	3	4	5	6	7
not effective		moderately effective				very effective

How consistently do you use this approach:

1 2 3 4 5
 not very consistent moderately consistent very consistent

How long have you been using this approach?:

Are others, who look after the child, using the same approach?

If yes: spouse: ____ other family: ____ babysitter: ____ daycare/preschool/school:

CBMS Supplemental Checklist on Management Strategies

Please indicate how frequently you use the following strategies to manage your child's problem behavior:

	<i>Never</i>		<i>Sometimes</i>			<i>Usually</i>	
	1	2	3	4	5	6	7
1. Physical or Mechanical Restraint (R) (includes such strategies as holding the child down and the use of a harness)	1	2	3	4	5	6	7
2. Nothing/Ignore (R) (not paying attention to behaviour or child)	1	2	3	4	5	6	7
3. Time-Out (R) (includes removing the child from activities for a fixed period of time)	1	2	3	4	5	6	7
4. Response Cost (R) (taking away privileges)	1	2	3	4	5	6	7
5. Positive Verbal for Appropriate Behavior (P) (includes praise, approval and encouragement)	1	2	3	4	5	6	7
6. Positive Physical and Tangibles for Appropriate Behavior (P) (includes hugging the child or giving the child a reward like a toy, when he/she is behaving appropriately)	1	2	3	4	5	6	7
7. Positive Physical and Tangibles for Inappropriate Behavior (R) (includes trying to soothe or calm the child down or giving the child what he/she wants, when he/she is behaving inappropriately)	1	2	3	4	5	6	7
8. Proactive and Preventative (P) (includes strategies used before the problem behavior occurs to try to prevent it)	1	2	3	4	5	6	7
9. Negative Verbal (R) (includes reprimands, saying "no" or "stop", or yelling)	1	2	3	4	5	6	7

10. Distraction or Change Location (R) (includes any attempt to distract child from the problem behavior; trying to get the child to do something different or go somewhere else during problem behavior)	1	2	3	4	5	6	7
11. Models or Teaches Appropriate Behavior (P) (includes instruction and attempts to demonstrate more appropriate or desirable behavior; reasoning)	1	2	3	4	5	6	7
12. Corporal Punishment (R) (includes spanking and the strap)	1	2	3	4	5	6	7

SECTION III.

Please put a check mark next to the ones that applies to you

More Information About Child Behavior Management Strategies Used

1. How did you learn about the strategies you described that you use for child problem behavior?:

- just doing what I feel will work:
- its how I was brought up:
- a friend advised me:
- a family member advised me: _____ Relation:
- read about them: _____ Name of book, magazine:
- heard about them on the radio _____ Name of radio show:
- saw them on TV: _____ Name of TV show:
- saw them on a video: _____ Name of video:
- a professional showed me:

- type of professional

- family doctor
- pediatrician
- neurologist
- psychiatrist
- other medical doctor (specify speciality): _____ nurse
- chiropractor
- dietician/nutritionist
- naturopath
- homeopath
- psychologist
- behavior consultant
- infant worker
- social worker/case coordinator
- teacher/ teacher=s aid (daycare, preschool, kindergarten, grade school, spec. ed)
- other professional (specify):

- type of training provided by the professional (check all that apply)

- came to my home
- in their office, clinic, or school
- attended a course, workshop, lecture, etc.

Appendix E.3

Parenting Sense of Competence Scale
(Gibaud-Wallston & Wandersman, 1978)

Please rate the extent to which you agree or disagree with each of the following statements.

	Strongly Disagree 1	Somewhat Disagree 2	Disagree 3	Somewhat Agree 4	Agree 5	Strongly Agree 6		
1.			1	2	3	4	5	6
	The problems of taking care of a child are easy to solve once you know how your actions affect your child, an understanding I have acquired.							
2.			1	2	3	4	5	6
	Even though being a parent could be rewarding, I am frustrated now while my child is at his/her present age.							
3.			1	2	3	4	5	6
	I go to bed the same way I wake up in the morning, feeling I have not accomplished a whole lot.							
4.			1	2	3	4	5	6
	I do not know why it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated.							
5.			1	2	3	4	5	6
	My mother was better prepared to be a good mother than I am.							
6.			1	2	3	4	5	6
	I would make a fine model for a new mother to follow in order to learn what she would need to know in order to be a good parent.							
7.			1	2	3	4	5	6
	Being a parent is manageable, and any problems are easily solved.							
8.			1	2	3	4	5	6
	A difficult problem in being a							

parent is not knowing whether you're doing a good job or a bad one.

- | | | | | | | |
|---|---|---|---|---|---|---|
| 9. Sometimes I feel like I'm not getting anything done. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. I meet my own personal expectations for expertise in caring for my child. | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. If anyone can find the answer to what is troubling my child, I am the one. | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. My talents and interests are in other areas, not in being a parent. | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. Considering how long I've been a mother, I feel thoroughly familiar with this role. | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. If being a mother of a child were only more interesting, I would be motivated to do a better job as a parent. | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. I honestly believe I have all the skills necessary to be a good mother to my child. | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. Being a parent makes me tense and anxious. | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. Being a good mother is a reward in itself. | 1 | 2 | 3 | 4 | 5 | 6 |

Appendix E.4



CONSUMER SATISFACTION QUESTIONNAIRE

Name of Participant: _____

Today's Date: _____

Name of Research Assistant: _____

Please select a number for each question that says how you feel about that question.

1. Did you enjoy playing the Family Game?

3 😊 Enjoyed it	2 😐 It was all right	1 😞 Did not enjoy it
-------------------	-------------------------	-------------------------

2. Do you feel that playing the game helped you as a parent?

3 😊 Helped me	2 😐 Not sure if it helped me	1 😞 Did not help me
------------------	---------------------------------	------------------------

3. Do you feel that you are able to use the skills learned in the game at home?

1 😞 No, I cannot use the skills at home	2 😐 Not sure if I can use the skills at home	3 😊 Yes, I can use the skills at home
--	---	--

4. Do you feel that your child(ren)'s behavior has improved since you started playing the Family Game?

3 😊 Yes, it has improved	2 😐 Not sure if it has improved	1 😞 No, it has not improved
-----------------------------	------------------------------------	--------------------------------

5. Would you like to join another Family Game group and learn some more parenting skills?

1 😞 I would not like to join	2 😐 Not sure if I would like to join	3 😊 Yes, I would like to join
---------------------------------	---	----------------------------------

6. Would you recommend the Family Game to other parents?

<p>1 ☹️ I would not recommend it</p>	<p>2 😐 Don't know if I would recommend it</p>	<p>3 😊 Yes, I would recommend it</p>
--	---	--

7. Did you like the Group Leader? (The Group Leader will not know your answer.)

<p>3 😊 Yes, I liked the group leader</p>	<p>2 😐 Not sure if I liked the group leader</p>	<p>1 ☹️ No, I did not like the group leader</p>
--	---	---

8. What did you like about the game? What did you not like about the game? What do you suggest to make the game better for other parents? Please answer below:

Appendix E.7

**FAMILY GAME COOPERATION TRAINING
Master List**

Category	Giving Instructions A	Praise B	Correction C	No-praise D
<p>cleaning up</p> <p>1</p>	<p>Your children have finished breakfast and have left their cereal bowls on the table. You want them to take them to the sink. What do you say? 1A1</p> <p>You want your children to put their coats on hooks when they come in from outdoors. What do you say? 1A2</p> <p>Your children have left their pyjamas on the bedroom floor. You want them to pick them up. What do you say? 1A3</p> <p>It's supper time and you want your children to help set the table. What do you say? 1A4</p> <p>You want your children to help clean their sandbox. What do you say? 1A5 - G</p> <p>You want your children to put their toys away and get</p>	<p>Your children finish their breakfast and put their cereal bowls in the sink without asking. What do you say? 1B1</p> <p>Your children put their coats on hooks when they come in from outdoors. What do you say? 1B2</p> <p>Your children have come in from outdoors with muddy boots and they take them off at the door. What do you say? 1B3</p> <p>You have asked your children to help set the table. They do. What do you say? 1B4 - G</p> <p>You ask your children to help put away their clean clothes. They do. What do you say? 1B5</p> <p>You ask your children to bring the dirty dishes over to the sink. They do. What do you say? 1B7</p> <p>Your children clean up their room without you asking. What do you</p>	<p>You have asked your children to clean up their toys. They ignore you. What do you do? 1C1</p> <p>You have asked your children to put their coats and boots on. They begin to whine that they can't do it. What do you do? 1C2-R</p> <p>You have asked your children to put their toys away before they can go outside. They refuse. What do you say? 1C3-R</p>	<p>You have asked your children to clean up. They make a face at you but they clean up. What do you say? 1D1-R</p> <p>You have asked your children to put their shoes away. They throw them into the cupboard and bang the wall. What do you say? 1D2</p> <p>You ask your children to clean up their toys in the living room. They stomp into the living room but they clean up their toys. What do you say? 1D3</p> <p>You ask your children to put their knapsacks away. They go off and play and return 30 minutes later and put their knapsacks away. What do you say? 1D4 - G</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>ready for lunch. What do you say? 1A6</p>	<p>say? 1B8</p> <p>You ask your children to put away their knapsacks. They do. What do you say? 1B9</p>		
<p>coming in 2</p>	<p>Your children are outside and you want them to come in. What do you say? 2A1</p> <p>You have taken your child to the park and it is time to go home. What do you say? 2A2</p> <p>Your child is going outside to play with friends and you want to know where they are going. What do you say? 2A3</p> <p>Your children have been playing in the backyard and it's getting dark. You want them to come in. What do you say? 2A4 - G</p>	<p>Your children come in from outside when you ask. What do you say? 2B1</p> <p>Your child comes in from outside to tell you that it is raining. What do you say? 2B2</p> <p>You ask your children to come in the house right away because a thunderstorm is starting. They do. What do you say? 2B3</p> <p>You ask your children to come inside and they do. What do you say? 2B4</p>	<p>You have asked your children to come in from outside. They run from you. What do you do? 2C1</p> <p>You have asked your children to stay on the driveway while you shovel. They run onto the road. What do you do? 2C2</p>	<p>Your children are outside. You ask them to come in right away. They come in 15 minutes later? What do you say? 2D1-R</p> <p>You have asked your children to come in from outside. They run around to the front of the house and come in the front door. What do you say? 2D2</p> <p>You have asked your children to stay on the driveway while you shovel. They step out into the road and then return to play in the driveway. What do you say? 2D3</p> <p>You ask your children to come straight home after school. They stay late playing in the school yard and then come straight home. What do you say? 2D4</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
<p>denial</p> <p>3</p>	<p>Your child asks for a popsicle just before dinner. What do you say? 3A1</p> <p>Your child asks for a cookie. It is almost supper time. What could you say? 3A2</p> <p>Your child has asked to play outside and it is raining. What do you say? 3A3</p> <p>Your children have been given some new toys which are too small for them. What do you say? 3A4</p> <p>Your child wants to go and play with a friend. You need to get groceries. What do you say? 3A5</p> <p>Your children want to wear their new spring jackets outside. It is snowing. What do you say to your children? 3A6 - G</p> <p>Your child wants to stay outside and play and it is starting to rain. What do you say? 3A7</p> <p>Your child asks you for a can of pop just before bedtime.</p>	<p>Your children ask you for cookies before supper. You ask them to wait until after supper. They say okay. What could you do? 3B1 - G</p> <p>Your children want to wear their new spring coats. You tell them it is too cold. They go and get their winter coats. What do you say? 3B2</p> <p>You serve liver for supper. Your child does not like it but eats it without complaining. What do you say? 3B3</p>	<p>Your child has a tantrum in the grocery store after you refuse to buy candy. What do you do? 3C1</p> <p>Your children begin to cry in the grocery store because they want a special cereal. What do you do? 3C2-R</p>	<p>Your child asks to watch television before supper. You say "yes". When it is time to turn off the T.V. your child cries but eventually turns it off. What do you say? 3D1</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	What do you say? 3A8			
children fighting 4	<p>Your children both want to play with the same toy. What do you say? 4A1</p> <p>Your children both want to watch a different television show. What do you say? 4A2</p>	<p>Your children are playing nicely together. What do you say? 4B1</p> <p>You ask your children to share a new toy with their sister and they do. What do you say? 4B2-R</p>	<p>Your children are fighting over who gets to watch their favourite television program. What do you do? 4C1-R</p>	<p>You ask your children to sit at the table while you finish supper. They start a fight with each other but remain at the table. What do you say? 4D1</p>
getting ready 5	<p>You have to be at the doctor's office for 1:00. Your child must come with you. It is time to get ready. What do you say? 5A1-R</p> <p>Your child has to be at the bus stop in a few minutes. It is time to get ready for the bus. What do you say? 5A2</p> <p>Your child has to leave for daycare in a few minutes. What do you say? 5A3 - G</p> <p>You want your child to come for supper. What do you say? 5A4</p> <p>You have to get ready to go to a friend's house. Your child is coming with you. What do you say? 5A5-R</p>	<p>Your child gets ready for daycare as soon as you ask. What do you say? 5B1</p> <p>Your child comes for supper as soon as you ask. What could you say? 5B2</p> <p>Your child gets ready for bed as soon as you ask. What do you say? 5B3</p> <p>You ask your children to brush their teeth and they do. What do you say? 5B4</p>	<p>You ask your children to brush their teeth before bed. They refuse. What do you do? 5C1-R</p> <p>You ask your children to get ready to go to school. They keep watching television. What do you do? 5C2</p> <p>You asked your children to go and put on their pyjamas. They look at you and say "no". What do you do? 5C3-R</p>	<p>Your children leave their boots in the middle of the hall. You ask them to put the boots in the front hall and they do. What do you say? 5D1</p> <p>You have asked your children to brush their teeth before school. They yell at you on the way to the bathroom to brush their teeth. What do you say? 5D2</p> <p>You have asked your children to get dressed right away. They pick up a toy and play with it first, and then get dressed. What do you say? 5D3</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>You want your children to get ready to go to the library. They have some books to return. What do you say? 5A6-R</p>			
<p>safety 6</p>	<p>You are going to be using the stove to make dinner. Your child is in the kitchen with you. What could you say? 6A1 You are going to be turning on the oven to make a cake. Your child is in the kitchen with you. What could you say? 6A2 You are in the kitchen making lunch using a sharp knife. Your child is in the kitchen with you. What could you say to your child? 6A3 You are getting into the car to go to the grocery store. Your children need to put on their seat belts. What could you say to your children? 6A4 You are going to be boiling some water for tea. Your child is in the kitchen beside you. What do you say to your child? 6A5 You are going to be using the lawnmower. Your child is in the</p>	<p>Your child moves away from the stove before he touches it. What do you say. 6B1 Your children say "hot" and move away from the stove when you turn it on. What do you say? 6B2 Your children always stand up in their chairs at the supper table if you have to get up. You get up and they stay seated in their chairs. What do you say? 6B3 Your children come to the door to tell you where they will be playing. What do you say? 6B4 You are walking your children to school. They stop at every street corner and look both ways. What do you say? 6B5 Your child comes in the house as soon as</p>	<p>Your children take their seat belts off while you are driving. What do you do? 6C1 Your child attempts to play with the stove. What do you do? 6C2 Your child attempts to stick a toy in an electrical outlet. What do you do? 6C3-R Your children run away from you while you are walking to the park with them. What do you do? 6C4</p>	<p>Your children are about to touch the stove. You tell them not to touch it and they move away. What do you say? 6D1-R</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>backyard with you. What do you say? 6A6 - G</p>	<p>the neighbour starts up his power mower. What do you say? 6B6</p>		
<p>waiting 7</p>	<p>You have to go into the grocery store to buy a few groceries. Your child is with you. What do you say? 7A1-R</p> <p>You need to talk to your partner for a few minutes. What do you say to your child? 7A2</p> <p>You are taking your child to the doctor. The doctor is often running behind and you know it will be a long wait. What could you say to your child? 7A3</p>	<p>You have been on the phone for five minutes and your child is playing quietly and not bothering you. What do you say to your child? 7B1</p> <p>Your friend is over for coffee. Your child is playing nicely and not bothering you. What do you say? 7B2</p> <p>Your child is playing nicely on the driveway while you shovel. What do you say? 7B3</p> <p>Your child is playing nicely in the backyard while you hang clothes on the line. What do you say? 7B4</p> <p>Your child is playing quietly while you vacuum. What do you say? 7B5</p> <p>You have waited a long time in the doctor's office. Your child plays quietly with some toys that you brought from home. What do you say to</p>	<p>You have asked your child not to crawl up on the counter while you are on the phone. They do. What do you do? 7C1</p> <p>You have asked your children to play quietly while you and a friend visit. They have a fight with each other. What do you do? 7C2</p> <p>Your child runs away from you in the video store while you are waiting in line to rent a video. What do you do? 7C3</p>	

Category	Giving Instructions A	Praise B	Correction C	No-praise D
		<p>your child? 7B6</p> <p>You ask your children to play quietly while you answer the door. They do. What do you say? 7B7</p>		
<p>general 8</p>	<p>Your children's toys are all over the floor and you want them to tidy up. What do you say? 8A1</p> <p>You have to shovel the driveway. Your child is with you. What do you say? 8A2</p> <p>You want your children to drink their milk at supper. What do you say? 8A3</p> <p>You want your child to go to bed in a few minutes. What do you say? 8A4</p> <p>Your children want to play in the basement with their toys. You want to make sure that they play only with their toys and not the washing machine. What do you say? 8A5</p> <p>You have just washed the floor and it is wet.</p>	<p>When you ask them, your children pick up all of their toys. What do you say? 8B1</p> <p>You have been making supper for a few minutes. Your children are playing quietly and not bothering you. What do you say to your children? 8B2</p> <p>Your child gets ready to go as soon as you ask. What do you say? 8B3</p> <p>Your child gets ready for the bus as soon as you ask. What do you say? 8B4</p> <p>Your children put their seat belts on as soon as they get into the car. What do you say? 8B5</p> <p>Your children eat all of their supper. What do you say? 8B6</p>	<p>You have asked your children to hang up their coats when they come in from outdoors. They put them on a chair. What do you do? 8C1</p> <p>You have asked your children to put their shoes in the cupboard. They throw them at the wall. What do you do? 8C2</p> <p>You ask your children to play in the backyard. You see them in the front yard and on the street. What do you do? 8C3-R</p> <p>You asked your children to come to the table for lunch. They continue to play with their toys. What do you do? 8C4</p> <p>Your children attempt to climb up on their dresser.</p>	<p>You asked your children to come to the table for dinner right away. They finish watching their television program and then come to dinner. What do you say? 8D1</p> <p>You ask your children to go upstairs and brush their teeth. They whine and groan but they do it. What do you say? 8D2</p> <p>You ask your children to sit at the table. They run around the table chasing their sister. What do you say? 8D3</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>You don't want your child to walk on it until it dries. What do you say? 8A6-R</p> <p>You want your children to brush their teeth after they eat their snack. What do you say? 8A7</p> <p>It is a half an hour before your children's bedtime. They have asked to watch a movie which is two hours long. What do you say? 8A8</p> <p>Your child wants to take their favourite toy to school for "show and tell". It is very expensive. What do you say? 8A9</p> <p>It's your child's bedtime. What do you say? 8A10</p> <p>Your child wants a toy that you cannot afford. What do you say? 8A11</p>	<p>You take your children out to a restaurant and they behave wonderfully. What do you say? 8B7</p> <p>Your children are afraid of going to the doctor. They go to an appointment without complaining. What do you say? 8B8</p> <p>You ask your children to sit at the table and they do. What do you say? 8B9</p>	<p>What do you do? 8C5</p> <p>You find your child playing in the basement with the dryer. What do you do? 8C6</p> <p>Your children tell you that they will not come for supper. What do you do? 8C7-R</p>	
<p>Individualized Questions (PS001)</p> <p>9</p>	<p>You want your son to play in the kitchen while you make dinner. What could you say? 9A1</p> <p>Your son tells you</p>	<p>Your son has been playing nicely with his toys in the living room for over 30 minutes. What could you say? 9B1</p> <p>Your son wants to go</p>	<p>Your son walks into the kitchen, picks up a large wooden spoon and starts to break it. What do you do? 9C1</p>	<p>You have just sat down for dinner and your son takes his fork and hits it against the table before using it to eat. What do you say? 9D1</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>that his favourite toy is broken and he wants you to replace it. What do you say? 9A2</p> <p>Your son tells you that he wants to play with his friends at the park but doesn't want you to go with him because it's embarrassing. What do you say? 9A3</p> <p>You see your son's shoelaces untied as he is heading out to go to school. What do you say? 9A4</p> <p>You want your son to throw out some of the broken toys and things in his bedroom. What do you say? 9A5-R</p> <p>Your son is watching TV in the evening and it is time to get ready to go to the YMCA. What do you say? 9A34</p> <p>You want your son to put his plate in the sink after dinner. What do you say? 9A35</p> <p>Your son asks to watch TV 10 minutes before he has to leave for school. What do</p>	<p>to the park with one of his friends and he comes to you and asks permission. What do you say? 9B2</p> <p>Your son goes to his sister's room to ask her if he can borrow something from her. What do you say? 9B3</p> <p>Your son asks you if he can have some money for a new toy. What do you say? 9B4</p> <p>Your son asks you to do an activity with him at home. What do you say? 9B5</p> <p>Your son has been playing with his toy figures for 20 minutes in front of you without damaging them. What do you say? 9B6</p> <p>Your son finishes his school homework for the next day and shows it to you. What do you say? 9B7-R</p> <p>Your son gets home from school and neatly puts his things away in the right places. What do you say? 9B8</p>	<p>Your son picks up a handful of cutlery drying in the disk rack. What could you say? 9C2</p> <p>You are at the mall and your son starts to whine and cry because he wants a new toy. What do you say? 9C3</p> <p>Your son has taken one of his sister's stuffed animals and is attempting to rip it. What do you do? 9C4-R</p> <p>Your son calls you to help him in the bathroom. You go there and ask him to try cleaning up on his own and he refuses. What do you do? 9C5</p> <p>You see your son leaving the house without telling you. What do you say? 9C6</p> <p>You notice that the money in your wallet is missing and you later discover it in your son's pant pocket while doing laundry. What do you do? 9C7</p>	<p>Your son returns something he took from his sister's room without asking the day before. What do you say? 9D2</p> <p>You ask your son to help you throw out his broken toys. He helps you but yells and whines while throwing out his toys. What do you say? 9D5</p> <p>You ask your son to put on his jacket before heading out to school. He tells you that you're mean before putting on his jacket. What do you say? 9D6</p> <p>You ask your son to put on his pajamas and he plays with a toy for 10 minutes before putting on his pajamas. What do you say? 9D4</p> <p>Your son comes home from school and throws his jacket on the living room floor. You ask him to pick it up and put it in the closet. He does. What do you say? 9D3</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>you say? 9A31</p> <p>Your child is playing on his Xbox and you want him to get ready for bed in 5 minutes. What do you say? 9A28</p> <p>Your son wants to buy a new video game and you want him to wait until next week. What do you say? 9A32</p> <p>Your son asks to buy a new video game and you just bought a new video game for him last week. What do you say? 9A29</p> <p>Your son wants to buy pizza for supper, but you have cooked supper already. What do you say? 9A33</p> <p>You are making dinner and your son asks you to do an activity with him. You want your son to do an activity with his brother while you are busy in the kitchen. What do you say? 9A30</p> <p>You want your son and daughter to join you for a board game. What do you say? 9A20</p> <p>You want your son to play a game of Uno</p>	<p>You ask your son how his day at school was and he tells you about a special activity he did in class that day. What do you say? 9B9</p> <p>Your son has come with you for a quick trip to the grocery store and he stays next to you without complaining throughout the trip. What could you say? 9B10</p> <p>Your son takes his plate to the sink as soon as supper is finished. What do you say? 9B19</p> <p>Your son turns off his Xbox as soon as you ask and gets ready for bed. What do you say? 9B14</p> <p>Your son asks to do an activity with you while you're busy in the kitchen. You ask him to wait for 10 minutes. He says ok and waits quietly in the living room. What do you say? 9B18</p> <p>Your son plays quietly in the living room, while you make a phone call in the kitchen. What do you say? 9B15</p>	<p>You see your son picking things out of the recycling container in your house. What do you say? 9C8</p> <p>Your son brings home an object he found lying on the road on his way home from school. What do you say? 9C9</p> <p>You ask your son how his day at school was and he calls you a name. What do you say? 9C10</p> <p>You are on the phone and your son is calling you to get your attention. What do you do? 9C11</p> <p>You ask your son to play with his toys while you are on the phone. You see him breaking his toys while you make your phone call. What do you do? 9C12</p> <p>You ask your son to do an activity with his brother and he hits his brother. What do you do? 9C15</p> <p>You ask your son</p>	

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>with his sister. What do you say?</p> <p>You want your son to help tidy up the living room. What do you say? 9A21</p> <p>You want your son to clean up the toys in his bedroom. What do you say? 9A25</p> <p>Your son wants new materials for crafts tonight, but you want him to wait until the weekend to buy them. What do you say? 9A22</p> <p>Your son wants to stay up past his bedtime on the weekend. What do you say? 9A26</p> <p>Your son wants to stay up past his bedtime on a school night. What do you say? 9A23</p> <p>Your son has a friend over and they are playing in the living room. You have visitors coming soon and you want the kids to play in the bedroom. What do you say? 9A27</p> <p>You want your son to quietly look at a book/do an activity while you make a phone call. What do</p>	<p>Your son and daughter are quietly watching TV together while you have a visitor. What do you say? 9B17</p> <p>Your son has played a great game of Uno with his sister without fighting. What do you say? 9B16</p> <p>Your son brushes his teeth after breakfast without being asked. What do you say? 9B12</p> <p>Your son hangs up his coat in the closet when he comes in from outside. What do you say? 9B13</p> <p>Your son asks you if you need any help in the kitchen while you make supper. What do you say? 9B11</p>	<p>and daughter to watch TV together while you are in the kitchen. They have a fight with each other. What do you do? 9C20</p> <p>Your son is on the other side of the table and you ask your son to come through the living room to get to the sink. He attempts to climb over the table. What do you do? 9C16</p> <p>Your daughter takes something that belongs to your son and he tries to hit her. What do you do? 9C19</p> <p>You ask your son to stay beside you on the sidewalk as you walk to school. He keeps jumping onto the road and back onto the sidewalk. What do you say? 9C14</p> <p>Your son has left the house without permission and comes back an hour later. What do you say? 9C18</p> <p>You have told your son twice to turn off his Xbox and get ready for school. He continues to play</p>	

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>you say? 9A19</p> <p>You want your son to do an activity by himself in the living room while you are busy in the kitchen. What do you say? 9A15</p> <p>You son is doing his homework and asks to take a break and watch TV before finishing the rest of it. What do you say? 9A18</p> <p>You want your son to stay in school every day this week to earn a new toy on the weekend. What do you say? 9A14</p> <p>Your son is in the kitchen beside you while you make sandwiches for snack/lunch. You want him to help you. What do you say? 9A17</p> <p>Your son wants to play on his Xbox and it is 15 minutes before his bedtime. What do you say? 9A13</p> <p>You want your son to sleep in his own bedroom. What could you say? 9A16</p> <p>You want your son to use wipes to wipe himself in the</p>		<p>and swears at you. What do you do? 9C17</p> <p>Your son is doing a craft with you. He gets upset over a mistake he makes and attempts to rip the boxes he is using for craft. What do you say? 9C13</p> <p>You are on the phone and your son comes up behind you and attempts to choke you by putting his hands around your throat. What do you do? 9C21</p>	

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>bathroom. What do you say? 9A12</p> <p>You want your son to brush his teeth after breakfast. What do you say? 9A10</p> <p>Your son is playing on his XBox and you have to leave for a doctor's appointment in 5 minutes. What do you say? 9A6</p> <p>Your son has woken up late and he has 30 minutes to get ready for school. He asks to play on his XBox when he wakes up. What do you say? 9A9</p> <p>Your son has just finished doing a craft with paints, and you are setting the table for supper. You want him to wash his hands before supper. What do you say? 9A7</p> <p>You want your son to stay on the sidewalk while you walk to school with him. What do you say? 9A8</p> <p>Your son asks you to get a drink from the kitchen, while you are busy cleaning your bedroom. You want him to get a drink by himself. What do you</p>			

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	say? 9A11			
Individualized Cards (BS002) 10	<p>You want your daughter to put away her clean laundry. What do you say? 10A1</p> <p>You want your daughter to show you her homework for the next day. What do you say? 10A2</p> <p>You want your daughter to get dressed for a doctor's appointment. What do you say? 10A3</p> <p>You want your daughter to help you clean the living room. What do you say? 10A4</p> <p>Your daughter wants a snack and you want her to get it on her own from the kitchen. What do you say? 10A5</p> <p>You just came home from grocery shopping and you want your daughter to help put away groceries. What do you say? 10A10</p> <p>You want your daughter to tidy up the living room before her friend comes over. What do</p>	<p>Your daughter comes into the kitchen while you are making dinner and asks you if you need any help. What do you say? 10B1</p> <p>You tell your daughter how late she can stay at her friend's place and she tells you she will be make sure to be back by then. What do you say? 10B2</p> <p>You have a guest coming over and you ask your daughter to help you tidy up the living room. She does. What do you say? 10B3</p> <p>You see your daughter nicely giving the TV remote to her sister to watch what she wants. What do you say? 10B4</p> <p>Your daughter folds her clean laundry and puts it away without you asking. What do you say? 10B6</p> <p>Your daughter helps you clean up the living room as soon as you ask. What do you say? 10B5</p> <p>Your daughter folds</p>	<p>Your daughter takes the TV remote from you and changes the TV channel, saying that she wants to watch something else. What do you say? 10C1</p> <p>You ask your daughter to clean her room and she screams at you. What could you say? 10C2</p> <p>You are out shopping with your daughter at the mall and she asks to buy an outfit that you think is inappropriate. What do you say? 10C3</p> <p>You notice your daughter's clothes on her bedroom floor and you ask her to sort her clean and dirty clothes for laundry. She tell tells you she can't do it. What do you say? 10C4</p> <p>Your daughter comes home from school and throws her backpack on the living room floor. What do you say? 10C5</p>	<p>You ask your daughter to check and see if her sister is okay. She stomps up the stairs but checks her sister. What do you say? 10D1</p> <p>Your daughter tells you she is going out for a while. You ask her where she is going and she makes a face at you but tells you where she is going. What do you say? 10D2</p> <p>You ask your daughter to put her dishes in the sink after finishing her supper. She starts to whine but puts them in the sink. What do you say? 10D3</p> <p>You ask your daughter to brush her teeth after breakfast and she starts to whine but brushes her teeth. What do you say? 10D7</p> <p>You ask your daughter to finish her homework and she makes a face at you but starts doing her homework. What do you say?</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
	<p>you say? 10A11</p> <p>You want your daughter to finish her homework before she can go out. What do you say? 10A12</p> <p>Your daughter is watching TV and you want her to go to bed in 15 minutes. What do you say? 10A13</p> <p>Your daughter has been playing on the computer for an hour and you want her to turn it off. What do you say? 10A14</p> <p>You want your daughter to use a broom to sweep her bedroom floor. What do you say? 10A6</p> <p>You want your daughter to change her sister's clothes. What do you say? 10A8</p> <p>Your daughter is watching TV and you want her to go to bed early tonight. What do you say?10A7</p> <p>Your daughter asks you to get a drink for her and you want her to get it herself from the kitchen. What do you say? 10A9</p>	<p>her clean laundry and puts it away when you ask. What do you say? 10B5</p> <p>You ask your daughter to stay with her sister while you make dinner. She reads a book to her sister. What do you say? 10B6</p>	<p>You ask your daughter to turn the TV off and finish her homework. She starts to whine and cry, saying that she doesn't want to do it. What do you say? 10C6</p> <p>You ask your daughter to help you set the table for supper and she tells you to stop bothering her. What do you say? 10C7</p> <p>You ask your daughter to come home by curfew and she comes home an hour late. What do you do? 10C8</p> <p>You ask your daughter to turn off the computer when her time is up. She starts to whine and says she won't turn it off. What do you do?10C17</p> <p>You ask your daughter to complete her homework and she says "no, I'll watch TV first." What do you say? 10C18</p> <p>You daughter is going to a friend's house and she is</p>	<p>10D6</p> <p>You ask your daughter to change her clothes and she says a swear word while going to change her clothes. What do you say? 10D5</p> <p>You ask your daughter to wash her bowl after having cereal and she groans but washes her bowl. What do you say? 10D4</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
			<p>wearing an inappropriate outfit. You ask her to change, but she refuses. What do you say? 10C19</p> <p>You ask your daughter to put away her laundry before going on the computer and she says "no." What do you say? 10C20</p> <p>You ask your daughter to sweep her bedroom floor and she says she doesn't want to do it. What do you say? 10C22</p> <p>You have asked your daughter to clean her room. She ignores you and calls her friend on the phone. What do you say? 10C21</p> <p>You ask your daughter to change her outfit to a more appropriate one. She tells you she doesn't want to do it. What do you do? 10C12</p> <p>You ask your daughter to clean her bedroom before she can go to her friend's house. She says she won't do it. What do you do? 10C16</p>	

Category	Giving Instructions A	Praise B	Correction C	No-praise D
			<p>Your ask your daughter to work on her homework. She says no and tells you she is calling a friend to come over. What do you do?10C11</p> <p>You want your daughter to go upstairs while you have a visitor. She starts yelling and says it's too boring upstairs and she'll stay in the living room. What do you do? 10C13</p> <p>Your daughter has been playing on your tablet for an hour and you ask her to give it back. She whines and says no, and continues to play on the tablet. What do you do? 10C14</p> <p>You are at the mall and your daughter wants to buy a new sweater that you can't afford. When you tell her she can't have it, she yells at you in the store. What do you do? 10C15</p> <p>Your daughter just finished her snack while watching TV and you ask her to take her plate to the kitchen. She said she doesn't want to do it.</p>	

Category	Giving Instructions A	Praise B	Correction C	No-praise D
			<p>What do you do? 10C9</p> <p>You tell your daughter to tidy up the living room while you make dinner. She says no and asks, "why can't you do it yourself?" What do you do? 10C10</p>	
<p>Individualized Cards (CM003)</p> <p>11</p>	<p>Your son has been watching TV before school and it is time to get dressed. What do you say? 11A1</p> <p>You want your son to eat his breakfast at the dining table. What do you say? 11A2</p> <p>You want your son to take a shower in 5 minutes. What could you say? 11A3</p> <p>You want your son to help you tidy up the living room. What do you say? 11A4</p> <p>You want your son to eat his vegetables at supper. What do you say? 11A5</p>	<p>Your son asks your permission to go and play with a friend. What do you say? 11B1</p> <p>Your son comes to you for a hug. What do you say? 11B2</p> <p>Your son puts his dishes away after dinner without being asked. What do you say? 11B3</p>	<p>You see your son attempting to put hand lotion in his mouth. What do you say? 11C1</p> <p>Your son wants a new toy at the mall and starts to swear when you refuse to buy it for him. What do you do? 11C2</p> <p>You ask your son to finish his breakfast and get ready for school and he tells you to shut up. What do you say? 11C3</p> <p>Your son has taken a knife from the kitchen and is using it to scratch the wall. What do you say? 11C4</p> <p>You ask your son to complete his homework and he</p>	<p>You ask your son to turn the TV off and he yells at you but still turns the TV off. What do you say? 11D1</p> <p>You ask your son to turn off his XBox and come for supper in 5 minutes. He turns it off in 20 minutes and comes for supper. What do you say? 11D2</p>

Category	Giving Instructions A	Praise B	Correction C	No-praise D
			<p>calls you a name. What do you say? 11C5</p>	

Appendix E.8

The Family Game

Place Cards Here

 LOSE A TURN	DRAW CARD	GO BACK 1 SPACE	Tell a nice story about your child	DRAW CARD	MOVE AHEAD 2 SPACES 
Tell a story about your family 					Tell something about your child that made you laugh
DRAW CARD	The Family Game				DRAW CARD
MOVE AHEAD 1 SPACE	Place Cards Here				LOSE A TURN
DRAW CARD				DRAW CARD	DRAW CARD
GO BACK 2 SPACES	DRAW CARD	Tell a story about your child	DRAW CARD	Tell a funny family story	START 
					

Appendix F

AGREEMENT OF CONFIDENTIALITY

I understand that as a research assistant for a study being conducted by Munazza Tahir under the supervision of Prof. Maurice Feldman at Brock University, I am privy to confidential information about participants in the study. I agree to keep all data collected during this study confidential and will not reveal it to anyone outside the research team.

Name: _____ Signature: _____

Date: _____ Witness Signature: _____

Appendix G

SCRIPT FOR AGENCY WORKERS TO DESCRIBE THE STUDY

Hello [insert name of parent], I wanted to tell you about a study that researchers at Brock are doing right now. They want to find out how parents learn to increase their parenting skills. The study is for parents who have children between 2 and 10 years old. If you would like to participate in the study or get some more information about it, please let me know and we will set up a meeting to talk to the researchers about the study.

Appendix H

SCRIPT FOR HOME OBSERVATIONS

In this study, we would like to observe you and your child at home. It is important that while we watch you we do not say anything to you and your child while you are doing your normal home routines. If you have any questions about parenting, we will include them in the Family Game sessions.

Appendix I

**Family Game Sessions
IOA Guidelines**

- I. **Start video at 0:00:20** (the first part includes the date and skill we're covering in a given session, and it would be preferable for second observer to remain naive to that).
- II. Look for the **parent's responses** to game cards (ignore Munazza's and Colleen's cards).
- III. Follow the **question codes** listed on the data sheets. If you cannot find a certain question or if the total questions don't match up with the total number of codes, find the question in the master list of questions (located in main folder on Google drive). You can use Ctrl+F to find the question.
- IV. **Operational definitions:**
 - a. *Recognition*: This refers to recognizing and acknowledging the child's compliance in a positive way within 5 seconds of the child's initiation or completion of the correct response. More specifically, the parent will reinforce the good behaviour in the form of verbal praise (e.g., "Great job picking up all your toys!"), physical reinforcement (hug or kiss) or tangibles (e.g., toys, treats, videos, tokens, stickers, etc). Recognition also includes correctly identifying inappropriate child behaviour and not reinforcing it. Some recognition game cards will include examples of the child cooperating, but simultaneously exhibiting inappropriate behaviour or a child stopping an inappropriate behaviour. In these examples, the parents are expected to withhold reinforcement even though the child complied.
 - b. *Clear Instruction*: This is an instruction that is stated as a declarative, not a question and the action expected of the child is obvious in the instruction (e.g., "Pick up your toys from the floor and put them in the toy box, Johnny" as opposed to "Can you clean up, Johnny?").
 - c. *Correction*: When the parent delivers a clear instruction and the child does not comply after repeating the instruction, the parent must 1) give a warning to the child that a specific privilege will be removed if the child does not comply, and 2) remove the privilege if the child continues to be noncompliant after the warning.
 - i. 001 - After video # 12, participant 001 is only allowed to remove stickers. Warnings or removal of any other privileges would be incorrect.
 - ii. 002 - Follow exact definition as listed above. Keep in mind that 002 cannot take more than 1 privilege away at a time and cannot remove it for longer than the rest of the day (or next day if the behaviour happens at night).
 - iii. **Note**: *If the parent gives a warning, but does not elaborate to say that they would remove privilege/stickers for continued noncompliance, the response is still correct with only a warning. Mark warnings as correct.*

- V. **Prompted responses are incorrect** (e.g., if the trainer says, "you missed a part of the answer there", that would be a prompt). Clarification of a question does not count as a prompt. Also, for Correction questions, if the trainer elaborates the question by saying "what of the child still doesn't listen?" it is not considered a prompt.
- VI. Calculate total percentages on the data sheets based on the letter in the question code (A=instructions; B & D=recognition; C=correction). This is the same for the R cards, but calculate those in a separate column.
- VII. Everything should be on the USB stick or on FG IOA account on Google drive. Contact me if you have any technical trouble or if you have any questions or concerns.
mt11lq@brocku.ca or (905) 394-0613.

Additional Guidelines:

- For game sessions, start playing the video after the review of previous session is done (this may be 2-5 minutes - you will have to watch for when the parent draws the first card, but don't listen to the review).
- When the parent draws a card, wait for her response and freeze the video as soon as the parents responds. When the video is frozen, record your score for the parent's answer and then unfreeze the video to keep playing.
- Do not go back and change your answer after hearing the trainer's feedback to the parent's answer (if possible, try to skip through the feedback). Just keep the scores as they are the first time you hear the parent's response (i.e., don't go back at any point to change your scores). The point here is that we don't want the trainer's feedback to influence your scores.

Appendix J

Family Game Study

Home Probe IOA Scoring Guidelines

- I. **Video scoring method:** 10-second partial interval recording. Score a Y under the appropriate column if a behaviour occurs at any point during the interval.
- II. **Operational definitions** of behaviours to record in each 10-second interval:
 - a. Correct Instruction: Any instruction stated as a clear and direct declarative that has a specific action for the child to follow (e.g., "Tommy, hang up your coat on the hook"). The instruction cannot have more than 2 steps (e.g., it would be wrong to say "get your coat on, get your shoes on and put your gloves on, so we can leave"). The instruction cannot be overly long or too complicated for the child to understand.
 - b. Incorrect Instruction: Any instruction that is stated too vaguely, unclearly or not directly is incorrect. For example, instructions stated as questions are incorrect (e.g., "Tommy, can you clean up your toys?"). Instructions phrased as statements are also incorrect ("it's bedtime, Tommy"). Instructions repeated more than once (without any different instructions in between) are incorrect.
 - c. Correct Praise: Every time the parent immediately praises (within 2-3 seconds) the child's compliance to an instruction just given. The praise should be specific and label the behaviour (e.g., saying "great job putting your dish in the sink"). However, we are recording non-labelled praise as correct praise too, as long as it is immediate (within 2-3 seconds).
 - d. Correct Correction: The parent provides 1 warning after the child does not listen to an instruction (repeated once). The warning must clearly state what the child will lose if they do not comply with the parental request. If the child does not follow instruction after the warning, the parent follows through with the warning and removes the privilege.
 - i. For Video B, replace "privilege" with "tokens"
 - e. Child Compliance: Every time the child follows an instructions just given within 5 seconds.
 - f. Child Noncompliance: Every time the child does not follow an instruction just given. This does not include instance of problem behaviour (those would go under *Child Problem Behaviour*). Record noncompliance if the child has not complied 5 seconds after the instruction is given. If child says "no" or otherwise indicates immediate noncompliance, record it as soon as it happens.
 - g. Child Problem Behaviour: Any inappropriate behaviour displayed by the child. This does not have to be in relation to the demand placed on the child. Child problem behaviour is limited to whining, sighing, flailing arms, saying "I don't want to do it", saying "no", running into the kitchen and running out, stomping up

and down stairs, slamming doors, name-calling, inappropriate language, saying stupid for 002's videos, hitting others, hitting self, saying "life sucks", spinning in the kitchen, swatting parent's hand away, kicking, biting, breaking objects, throwing objects, banging objects/hitting objects, and arguing with parent.

III. **NOTE:** Freeze video after EVERY 10 seconds and make sure you record all instances of each behaviour listed above, in the sequence provided above. Rewatch the interval as many times as you need to, in order to capture every instance.

IV. Example of three scored intervals:

Interval (10s)	Correct Inst.	Incorrect Inst.	Correct Praise	Correct Corr.	Child Compl.	Child Noncomp.	Child Neg.
0:00 - 0:10	Y					Y	Y
0:10 - 0:20		Y		Y		Y	
0:20 - 0:30	Y				Y		Y

Additional Guidelines:

- COMPLIANCE is recorded in the interval where the child BEGINS to complete the action that the parent asks him to do
- NONCOMPLIANCE is recorded when the child does not comply after 5 seconds of parent giving instruction
- Parent is expected to go into correction when child has NOT COMPLIED AFTER 5 SECONDS of giving instruction
- If the parent praises compliance WHILE child is complying, it is CORRECT PRAISE. Record praise in the interval in which praise happens.
- If parent does not label behaviour within praise, but still praises in response to compliance, it is still CORRECT PRAISE
- **If we cannot hear/decipher a possible instruction after watching the interval 3 times, we DO NOT RECORD IT**
- If the SAME INSTRUCTION is given a THIRD time, it is INCORRECT (unless there is another instruction in the middle). *For example, "put on your shoes; put on your shoes now; put your shoes on" - the THIRD ONE HERE IS INCORRECT while the first two are correct. But, if parent says "put on your shoes; put your shoes on; put on your jacket; wear your shoes" - the THIRD ONE HERE IS CORRECT.*
- If child asks permission to do something and parent replies to it, the parent's reply is considered AN INSTRUCTION (you have to decide whether it is correct or incorrect)
- When the parent asks the child to CHOOSE BETWEEN things (**observable choice**), that is a CORRECT INSTRUCTION
- **GENERAL QUESTIONS ARE NOT INSTRUCTIONS** ("what colour is the sky?" or "what are you looking for?" or "do you need help?" or "what do you want?"). These

would be questions that the child verbally responds to. We do not record these as instructions at all.

- This only applies to questions that don't have a direct action in them. If parent says "can you put your shoes on?", this would be an INCORRECT INSTRUCTION. If parent says, "do you want to clean up your room?", this would be an INCORRECT INSTRUCTION.
- Some instructions will STAND ALONE, because they are for the future and do not warrant compliance or noncompliance at the time (e.g., "you need to take the garbage out tonight").
- If two instructions are given about the same thing and compliance happens to the 2nd instruction, ONLY RECORD COMPLIANCE/RECOGNITION for SECOND INSTRUCTION (e.g., "You want a fork?" and then "Grab a fork for yourself and your brother" - if the child complies, only record compliance for the SECOND INSTRUCTION)
- When an instruction is TOO LONG OR COMPLICATED, it is INCORRECT even if it is stated directly (e.g., "get your books because we have to go return them or else we will get a fine charged on them").