"THE INCREDIBLE YEARS BASIC PARENT PROGRAM FOR PRESCHOOLERS AT RISK FOR DEVELOPMENTAL DISABILITIES IN THE HONG KONG COMMUNITY SETTING"

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Abstract

Parents of children with developmental disabilities experience a greater level of stress than parents of typically developing children. Parental stress disrupts parental functioning, setting a vicious cycle of coercive parent-child interactions and further stress. The current study aims to break this vicious cycle by evaluating the effectiveness of the Incredible Years Basic Parent Training (IYPT) for Chinese preschoolers at risk for developmental disabilities in a community clinic setting in Hong Kong. Fifty-two parents of children with developmental delays (age 3-6 years) were randomly assigned to either a parenting program (EXP) or a waitlist-control (WLC) condition. Multi-informants and multi-measures of child and parenting behaviors were taken before and after the 12-week intervention. Medium intervention effects were found in primary-caregiver parents' self-reported parental stress index. Medium-to-large intervention effects were found in both primary-caregiver parent-report and spouse-report measures of children's oppositional behaviors. While primary-caregiver parents did not report a significant change in their parenting practices, their kins/spouses nonetheless reported improvements of a small effect size in the primary-caregiver parents' parenting practices. Blinded observations of parent-child interactions during a structured play activity indicated significant short-term effects on positive parenting and coaching. Parents had a high attendance rate and reported high satisfaction with the program. Treatment effects did not seem to correlate with demographic and other characteristics of the parents, suggesting that the treatment effect was robust across different profiles of parents. Preliminary results suggest that the Incredible Years Basic Parent Training is an effective and feasible intervention in the community settings for Chinese preschoolers at risk for developmental disabilities and their parents in Hong Kong.

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List of Abbreviations

ADHD – Attention Deficit Hyperactivity Disorder

AEDI - Australian Early Development Index

ANCOVA - Univariate Analysis of Covariance

ASD - Autism Spectrum Disorder

BII - Bicultural Identity Integration

CBCL - Child Behavior Checklist

CJI - Joint attention initiated by child

CJR - Jointed attention responded by child

CO – Compliance

DC - Direct Command

DD- Developmental Disabilities

DPIC-III - Dyadic Parent-child Interaction Coding System: Abbreviated Version (3rd Edition)

DPICS - Dyadic Parent-Child Interaction Coding System

EXP- Experimental condition

HOME - Home Observation for Measurement of the Environment

HOPE program- Hands-On Parent Empowerment program

IC - Indirect Command

IY- Incredible Years

IYPT- The Incredible Years Parent Training Program

LP - Labeled Praise

NHW - Non-Hispanic White

NICE- The National Institute for Health and Clinical Excellence

NTA - Negative Talk

ODD – Oppositional Defiant Disorder

OPP - Oppositional

PCDI - Parent-child dysfunctional interaction

PD - Parental Distress

PHDCN - The Project on Human Development in Chicago Neighbourhoods

PJI - Joint attention initiated by parent

PJR - Joint attention responded by parent

PSI-SF - Parenting Stress Index–Short Form

PT- Parent Training

RCT – Randomized Controlled Trial

SEN – Special Education Needs

SSTP-E - Stepping Stones Triple P-Enhanced Program

SSTP-S - Standard individual Triple P intervention Program

Triple P -The Positive Parenting Program

VR - Verbal Responsiveness

WLC- Waitlist-control Condition

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature: _____

Date: _____

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Chapter 1: Introduction

Background

For typically-developing children, speech and communication skills appear to unfold effortlessly. For children with developmental disabilities, however, acquiring such basic skills can remain a lifelong struggle. Consider, for example, children who are diagnosed with Autism Spectrum Disorder (ASD). Their communication, empathy, social function, and expression can all be impaired. Research on children with autism and pervasive developmental disorders has identified deficits and differences in social communicative and relative symbolic abilities, including limited ability to use conventional preverbal and verbal means of communication, lack of pretend play, and limited use of shared positive affect and eye gaze to regulate communicative interactions. Correlational findings indicate three clusters of impairments involving joint attention, symbolic play and social/affective signalling (Wetherby, Prizant, & Hutchinson, 1998). Many of these individuals will struggle their entire life with social interaction as well as basic communication skills. Without treatment, speech skills, as well as other forms of interpersonal interaction, may be substantially impaired, leaving individuals with limited means of communicating basic wants and needs. Critical research on early intervention is being conducted, focusing on skill acquisition, and language formation (Hailpern, Karahalios, Halle, Dethorne, & Coletto, 2009).

Furthermore, children and adults with intellectual and other developmental disabilities are seven times more likely to be diagnosed with a severe behavior disorder or mental health diagnosis than are their typically developing counterparts (Brown, McIntyre, Crnic, Baker, & Blacher, 2011). This dual diagnosis of cognitive and behavioral impairments places additional strain on parents and teachers (McIntyre, Blacher, & Baker, 2006), and it is an issue of serious concern to healthcare-providers.

Sociocultural Context

Chinese parents in Hong Kong has an intense concern for their children to be successful, particularly at school (Chao, 1994), children with early signs of autism, attention-deficits and developmental delays, such as speech and language delays, social skills deficits and cognitive delays, face many more obstacles in the fulfilment of family expectations related to academic achievement than their peers. As expected, parents who have children with developmental delays experience more stress than parents of typically-developing children (McIntyre, Blacher, & Baker, 2006). Parental stress disrupts parental functioning, thereby indirectly affects children's adjustment, potentially setting in motion a cycle of coercive parent-child interactions and further stress (Ho, Yeh, McCabe, & Lau, 2012; Mah & Johnston, 2012).

A needs assessment report conducted by the Committee on Promoting Holistic Development of Preschool Children (2005), found in their surveys that Hong Kong parents commonly evaluated their children's worth based on academic performance, tend to overprotect them and there is an emphasis on obedience. The assessment report also included comments from pre-school workers, academics and health professionals that parents in Hong Kong lacked knowledge about child development, which may lead to parental expectations which are developmentally inappropriate and unrealistic.

Shifting Parenting Style and Attitudes in Hong Kong

On top of the stresses that parents face with parenting children with developmental delays, the literature also indicates that contemporary Chinese parents experience considerable parental anxieties about raising their children in a societal context strikingly different from those of their own upbringing in this globalizing world. Chen and Chen (2010) have noted a considerable shift in parental child-rearing attitudes and values in Mainland China. For example, even between a period as short as 4 years (between 1998 and 2002),

Shanghai parents' scores on parenting measures evidenced a notable shift toward higher warmth and autonomy support and toward lower power assertion. Among the children, shyness, which had been a traditionally valued trait associated with modesty and self-control, was correlated with positive psychological adjustment in 1990. However, by 2002, shyness was negatively associated with peer acceptance and school adjustment and positively correlated with depression and peer rejection among Chinese school children (Chen & Chen, 2010). This example reflects that Chinese parents are paying increasing attention to young children's emotional and social needs, as well as to their mastery of literacy and cognitive skills. This is a positive change in parenting attitude because social and emotional adjustments are critical ingredients for success in school.

Many Americans would define traditional Chinese parenting as the "tiger mother", a prevailing stereotype of traditional Chinese parenting which has received much attention in America (Chua, 2011). The tiger, Chua (2011) explains, is "the living symbol of strength and power", inspiring fear and respect. Chua (2011) defined herself as a "tiger mother" and reported that she assumed the absolute right to dictate her two daughter's activities and demand rigorous academic standards of them at all times, ridiculing them if necessary to spur them on to greater efforts. They were expected to be top in every subject and never get anything other than A-grades – because, Chua (2011) explains, Chinese parents believe it is their responsibility to ensure their children's academic achievement above everything else. Even if the methodology of most parents today differs from Chua's (2011), their motivations might be exactly the same: a desire to see their children excel in school, demonstrate expertise in one or preferably several extracurricular activities, and ultimately gain acceptance to college (the more prestigious, the better) in order to ensure parental-defined success and security. Research shows that tiger mom, which owes its existence to the belief that "academic achievement reflects successful parenting" (Chua, 2011), ironically is

negatively associated with academic and educational attainment. On the contrary supportive parenting, not tiger parenting, is associated with the best developmental outcomes: low academic pressure, high GPA, high educational attainment, low depressive symptoms, low parent– child alienation, and high family obligation (Kim et al., 2013).

The literature shows that in Asian-heritage families, parenting looks very different from what is depicted or implied by the caricature image of the tiger mother, although there is a strong emphasis on “teaching” and “training” children. Modern Chinese parents usually do not adopt the tiger parenting style and that there is much more variations in Asian-heritage parenting behaviors and practices beyond being strict, controlling, and demanding high academic achievement of their children (Juang, Park, & Qin 2013). Chua (2011) provides one extreme example of traditional Chinese parenting, which has been described as more controlling, more authoritarian, and less affectionate than American parenting (Chao, 1994). Chen et al. (1998) found that, relative to North American parents, Chinese parents were more likely to endorse a punishment orientation as a method of discipline and more likely to use high-powered coercive strategies. The mother's relationship with the child is defined by specific role requirements that have evolved from the principles of Confucius. These Confucian principles require that children must show loyalty and respect to their elders, and also that the elders must responsibly teach, discipline, or "govern." Each party must fulfil these role requirements in order to maintain the social harmony, particularly in the family, that is also stressed under Confucian tradition. The concepts of "training" or “chiao shun” have been accorded very positive meanings or associations that were shaped by Chinese traditions, including but not limited to the Confucian influence (Chao, 1994).

Contemporary Chinese parenting in Hong Kong appears to be a combination of traditional Chinese and Western ideologies and practices. On the basis of data from parents of preschool-aged children in Hong Kong and Taiwan, Lieber, Fung, and Leung (2006)

identified four sets of Chinese childrearing concepts: training, shame, authoritative, and autonomy. The first two constructs appear to be consistent with traditional Chinese cultural ideologies, based on the Confucian notion that parents are responsible for training the child to be socially and morally responsible and that shame serves as a key emotion in the socialization of children's social sensibilities. The latter two constructs resemble constructs from the West, with the beliefs that parents should encourage and nurture children's self-esteem, independence, and expressions of opinions and feelings.

A recent paper by Way et al. (2013) studied parenting beliefs of mothers from Nanjing, China. In contrast to the tiger mother image, the mothers they interviewed had broader goals for their children beyond academic success, including being happy, self-sufficient, and socially and emotionally well adjusted. The study reflects that contemporary parents value the psycho-social development of their children. These parents are eager to teach their child to be sociable and emotionally regulated individuals but are lacking the skills because they had been brought up in a different generation with traditional Chinese parenting. For example, children in Hong Kong are now born into the cyber-world, the positive and negative impact of digital usage on children's academic, cognitive, physical, psychological and social development requires parents to practice a combination of restrictive, instructive and co-using approaches according to the temperament and personality of the child, rather than a predominately restrictive approach. The flexible use of parenting techniques requires parents to strike a fine balance between setting limits, guiding the interpretation of the content exposed and modeling appropriate digital usage themselves (Wu et al., 2014).

The challenges and stresses of parents' adapting to rapidly globalized cosmopolitan society and the intergenerational differences in parenting expectations and demands presents a timely opportunity for intervening and equipping these families, who have children at risk of developmental disability, with research-based parenting strategies that are associated with

optimal developmental outcomes and to create growth-promoting environments to improve their child's prognosis. These parents are open to seeking new parenting perspectives to enable them to raise academically, socially and behaviorally competent children who can function flexibly and effectively in a complex and rapidly changing context and culture of Hong Kong.

Coping Strategies Used by Parents in Hong Kong

For Chinese families with children with developmental disabilities, avoidance appears to be the most dominant stress coping strategy employed (Wong, Lam, Leung, Ho, & Au-Yeung, 2014). Other strategies include acceptance, where an Acceptance and Commitment Therapist (ACT) might work with a family to reframe a perceived problem as an opportunity for growth instead (Blackledge & Hayes, 2006). Another common strategy is the problem solving approach. This involves spending many hours on tutoring the child, filling the week with many different activities in hope of boosting the child's cognitive development (Shek & Tsang, 1993).

Recent research by Wong et al. (2014) identified three common coping strategies employed by Hong Kong Chinese parents of children with Autism Spectrum Disorders – an increasingly prevalent diagnosis in Hong Kong as well as worldwide. The strategies are: constructive (e.g. seek help and support from professionals), avoidant strategies (e.g. take my child out less often), and confrontational strategies (e.g. lodge complaints to the people and authorities concerned). Constructive strategies, including strategies of problem-focused coping (e.g. 'Prepare preventive measures so as to minimize possible difficulties') as well as strategies of emotional-focused coping (e.g. 'Share feelings with other parents), were found to predict better adjustment. These coping strategies are relationship-focused strategies, which aim at managing, regulating, and preserving relationships during stressful times; they are quite compatible with the cultural norm in China. Luong, Yoder, and Canham (2009) also

found that many Asian parents of children with Autism Spectrum Disorders considered school as the primary and most supportive entity. One clinical implication is to use school as a platform to organize more self-help groups and mutual support groups for these parents. Such interventions can provide them with opportunities to share common care-giving concerns and build up a strong interpersonal support network.

A meta-analysis on the effectiveness of parenting programs revealed that offering training in a community setting can reduce psychological and logistic barriers to attendance and hence influence intervention outcomes (Reyno & McGrath, 2006). Moreover, economically-disadvantaged families are more likely to complete parent training programs in community settings than in clinic settings (Cunningham, Bremner, & Boyle, 1995). Administrative support for parenting programs is important, and program staff needs to be enthusiastic about the program to encourage parents to attend (Gross & Grady, 2002). This would be more likely if the mission of the service-providing organization aligns well with that of the parent training program (Schurer, Kohl, & Bellamy, 2010). Just like child/family services agencies, preschools are highly accessible to parents (Gross & Grady, 2002). Preschools also have mission – namely, promoting child development – that aligns well with that of parent training programs, which offer early intervention for child developmental problems. Staff will likely see parent training as supporting the goals of the preschool and will in turn support and encourage parent participation and attendance.

Intervention Context

The Child Development Centre is a non-governmental organisation in Hong Kong. The overall goal of the centre is to provide early intervention for children with Special Educational Needs (SEN). Children six years of age and under with a diagnosed developmental delay attend the centre for special needs preschool and early intervention (such as occupational therapy and speech therapy). It is often a very stressful period for

parents to first learn that their child either has or is at risk for having a developmental disability.

In order to assist children at risk for, or already diagnosed with, developmental disabilities (DD) and their parents, we wondered whether parents' stress will decrease if they learn constructive strategies to improve their child's language, social and emotional competence and behavioral management skills with a small group of parents. Will this strengthen parents' resilience and improve their perceived self-efficacy so that they become better equipped and less stressed when raising a child with developmental disabilities?

Based on a review of research on well-established parent training, the parenting program selected for the present study is the Incredible Years Basic Parent Program (Basic IYPT; Webster-Stratton, 2001), identified as a Blueprints Model Program by the Center for Violence Prevention (http://www.colorado.edu/cspv/blueprints/modelprograms.html) at the University of Colorado and recommended by the American Psychological Association Task Force as meeting criteria for empirically supported mental health intervention for children (3–8 years old) with conduct problems (http://www.incredibleyears.com). This intervention is also recommended by The National Institute for Health and Clinical Excellence (NICE) guidelines in the U.K., and it meets rigorous criteria for well-established interventions (Brestan & Eyberg, 1998).

Unlike parenting programs for families who have children with behavior problems, most programs for children with developmental disabilities target increasing children's adaptive behavior, self-help skills, language, or academic skills. The Incredible Years Parent Training Program emphasizes behavior management, limit setting, and reducing challenging behavior, like most parent training programs; however, this program also emphasizes

developing positive relationships with children, especially through developmentally appropriate play and positive interactions. Interventions such as the Incredible Years Parent Training Program that assist parents in developing positive parent–child interactions and using appropriate behavior management strategies offer a promising approach to mitigate the risk for developing a severe behavior disorder comorbid with developmental disabilities.

Research Aims

The current study aimed to evaluate the effectiveness of a parent training (PT) program called The Incredible Years Basic Pre-school Parenting Program (Webster-Stratton & Reid, 2010), for parents with 3-6 year-old children with developmental disabilities in the community setting of Hong Kong. This treatment program is a well-established parenting intervention with strong research support in Western societies (including immigrant populations). This treatment was to be implemented for the first time in Hong Kong in a community setting. The treatment followed a published structured curriculum and targeted skills in four areas: (a) developmentally appropriate play/involvement, (b) praise and rewards, (c) limit setting, and (d) handling misbehavior. Each weekly meeting involved group discussion, generic videotape vignettes, role-playing, and feedback (Webster-Stratton & Reid, 2010). At the end of each session, parents were assigned homework to practice and apply their new skills; homework completion was formally monitored to track parent's understanding and ability to use the techniques; parent's evaluation on the usefulness of the sessions was also monitored weekly.

After the intervention, parents in the experimental group were predicted to: (1) have significantly lower levels of parental stress at post-test than the waitlist control group; (2) be able to engage in more behaviors associated with positive child development, such as praise, indirect commands, verbal responsiveness, and be able to initiate and respond to their child in the form of joint attention; (3) engage in fewer negative behaviors, such as criticism and

direct commands. Children in the experimental group were predicted to: (1) display fewer behavioral problems; (2) be more compliant; (3) be more likely to initiate and respond to their parents; (4) be more likely to achieve joint attention, as compared to the children in the wait-list control group. Given parenting practices in the Chinese culture, Chinese-speaking parents were predicted to find certain topics somewhat harder to learn than other topics, specifically, in the areas of praise and reward, emotion coaching and ignoring misbehaviors. On the other hand, they might find topics such as limit-setting easier to learn.

Significance, Scope, and Definitions

This study represents a first attempt to implement and evaluate The Incredible Years Basic Pre-school Parenting Program in a Chinese community. It examined whether this parenting program – developed in the U.S. – would prove effective for reducing the stress of parents of children with developmental disabilities and for reducing child problem behaviors in Hong Kong. Secondly, it also investigated whether these target techniques improved the quality and sensitivity of the parents' interactions with their children. Thirdly, when research-based strategies were implemented by parents, did their children show improvement in their behaviors and social skills?

The results can have important clinical implications. It will speak to whether parent training is effective for Chinese parents with children with developmental disabilities in Hong Kong. In addition, it will inform clinical practitioners which topics require more sessions and what kind of adaptations might make the parent training effective for Chinese parents.

Thesis Outline

In the next chapter, I will review the literature for the importance of early intervention and parent training on child development, the well-established parent training that are available and its relevance for Chinese parents of children with developmental disabilities. Chapter 3 covers the research design and highlights the multi-method and multi-informant

assessment tools we used and the adaptations made to the Incredible Years Basic Parent Training for the current population. Chapter 4 presents the results relevant to our hypotheses. Chapter 5 discusses the present findings and evaluates the results with reference to prior research. Qualitative findings containing parents' feedback and process issues were documented to help understand and interpret the results. The contributions of this research and its clinical implications are discussed in the final chapter.

Chapter 2: Literature Review

Parent education and support programs have a long history, aiming at in reducing negative parent–child interactions and behavior problems. Although these programs may be effective in preventing and resolving childhood behavioral problems, not every family benefits uniformly. This review focuses on the importance of early intervention and parent training on child development, theoretical underpinning of parent training, its application to parents of children with developmental disabilities and its effectiveness to the Chinese families.

The Critical Period on Brain Development

According to the National Scientific Council on the Developing Child, Center on the Developing Child at Harvard University (2007), early experiences affect the development of brain architecture**,** which provides the foundation for all future learning, behavior, and health. The first years of life are a critical time for the development of brain circuits. The brain is most plastic and has the most capacity for change. It is easier or less costly to form strong brain circuits during the early years of life than to attempt to fix by intervening later. An abundance of scientific evidence clearly demonstrates that critical aspects of brain architecture begin to be shaped by experience before and soon after birth, and many fundamental aspects of that architecture are established well before a child enters school (National Scientific Council on the Developing Child, 2007a).

The basic principles of neuroscience and the technology of human skill formation indicate that later remediation for highly vulnerable children will produce less favorable outcomes and cost more than appropriate intervention at a younger age (Center on the

Developing Child at Harvard University , 2007). The critical period of the development of the brain enables a neural circuit to optimize its architecture for the needs and environment of the individual. Once this critical period has passed, in order for the brain to take full advantage of this plasticity, experience needs to be tailored to activate the relevant neural circuits and the individual's attention must be engaged in the task. The implications for later interventions in development are that the task will be harder, more effortful and time-consuming to acquire (National Scientific Council on the Developing Child, 2007a).

Cognitive, emotional, and social capacities are inextricably intertwined in the brain, and, in like fashion, learning, behavior, and both physical and mental health are highly interrelated throughout the life course. One domain cannot be targeted without affecting the others. The brain's multiple functions operate in a richly coordinated fashion: Emotional well-being and social competence provide a strong foundation for emerging cognitive abilities, and together they are the bricks and mortar that comprise the foundation of human development. The emotional and physical health, social skills, and cognitive-linguistic capacities that emerge in the early years are all important prerequisites for success in school and later in the workplace and community (National Scientific Council on the Developing Child, 2004b).

The concept of school readiness is not exclusively a matter of fostering literacy and number skills. It must also include the capacity to form and sustain positive relationships with teachers, children, and other adults, and develop the social and emotional skills for cooperating with others. Children clearly need the social and emotional capabilities that enable them to sit still in a classroom, pay attention, and get along with their classmates just as much as they need the cognitive skills required to master the reading and math concepts taught in kindergarten (National Scientific Council on the Developing Child, 2004a).

The Influence of Parenting on Child Development

Assuring growth-promoting experiences through a range of parent education and early intervention services can have a lasting impact on the brain development of children during this period of rapid synapse formation. Adult interaction with the child during this period is regarded as the key to brain development. A secure attachment relationship with an adult, with care and stimulation, will establish the wiring patterns in the brain which will influence future learning and social adjustment (National Scientific Council on the Developing Child, 2004a).

The development of a child's brain architecture depends on the establishment of nurturing and stable relationships with the important people in his or her life. Early, secure attachments contribute to the growth of a broad range of competencies, including a love of learning, a comfortable sense of oneself, positive social skills, multiple successful relationships at later ages, and a sophisticated understanding of emotions, commitment, morality, and other aspects of human relationships. Stated simply, establishing successful relationships with adults and other children provides a foundation of capacities that children will use for a lifetime (National Scientific Council on the Developing Child, 2004a).

Parenting is a significant determinant of child development. The reciprocal interaction between parent and child, in which young children naturally initiate interaction through babbling, facial expressions, and gestures and adults respond with the same kind of vocalizing and gesturing builds and strengthens brain architecture and creates a relationship in which the child's experiences are affirmed and new abilities are nurtured. Children who have healthy relationships with their primary caregivers are more likely to develop insights into other people's feelings, needs, and thoughts. Findings from a longitudinal study (Belsky et al., 2007) demonstrated the enduring influence of parenting during the early years in a child's life. Children who experienced parenting that was warm, sensitive, cognitively

stimulating and not intrusive or over-controlling early in life showed better cognitive functioning, academic achievement and social adjustment when in middle primary school. The opposite was true for children who did not experience this type of care. Recognition that the early years lay the foundation for future development has led to investment in evidence-based prevention and treatment programs for young children and their families (Center on the Developing Child at Harvard University, 2007). Early intervention programs seek to mitigate risks for vulnerable children by improving parental capabilities, addressing risk factors and enriching children's experiences.

The relationships children have with their caregivers play critical roles in regulating stress hormone production during the early years of life. Stresses experienced by parents and other caregivers can affect a child's developing brain architecture and chemistry in a way that makes some children more susceptible to stress-related disorders later in life. Significant maternal stress during pregnancy and poor maternal care during infancy both affect the developing stress system in young animals and alter genes that are involved in brain development. Extensive research on the biology of stress now shows that healthy development can be derailed by excessive or prolonged activation of stress response systems in the body and the brain, with damaging effects on learning, behavior, and health across the lifespan. While moderate, short-lived stresses are positive for human development, sustained activation of the stress response system can lead to impairments in learning, memory, and the ability to regulate certain stress responses (National Scientific Council on the Developing Child, 2005).

On the other hand, children who experience the benefits of secure relationships have a more controlled stress hormone reaction when they are upset or frightened. This means that they are able to explore the world, meet challenges, and be frightened at times without sustaining the adverse neurological impacts of chronically elevated levels of hormones such

as cortisol that increase reactivity of selected brain systems to stress and threat. In contrast, children whose relationships are insecure or disorganized demonstrate higher stress hormone levels even when they are mildly frightened. This results in an increased incidence of elevated cortisol levels, which may alter the development of brain circuits in ways that make some children less capable of coping effectively with stress as they grow up. Interventions that provide consistent, predictable, and nurturing care to children's primary caregivers will create supportive relationships that as buffers against the adverse effects of stress on the architecture of the developing brain (National Scientific Council on the Developing Child, 2005).

Theoretical Background

Theoretical Basis of Parent Training (PT) For Children with Developmental Disabilities

Patterson's (2002) coercion model predicts that behavioral problems either stem from or are exacerbated by negative parenting practices (Patterson, 1976; Patterson, 2002; Sameroff & Fiese, 2000). The model describes a vicious cycle of parent–child dyadic exchanges, maintained by negative reinforcement and escape conditioning that may ultimately lead to long-term negative child (and parent) outcomes. With the repetition of these cycles, the acquisition and maintenance of these maladaptive patterns is likely to accelerate (Patterson, 1976), perhaps leading to antisocial behavior (Patterson, Reid, & Dishion, 1998). Prevention and early intervention strategies, then, should be critical in providing parents the skills necessary to overcome or correct early child difficulties and manage their day-to-day child-rearing stress. Providing services to families with young children is particularly important, as treatment gains are generally greater in young children when compared to their older counterparts with more severe, pervasive behavioral problems and longer reinforcement histories (Church, 2003; Patterson et al., 1998; Ruma, Burke, &

Thompson, 1996). Because young children with developmental disabilities often receive early intervention and/or preschool education and related services, providing parent education within the context of children's ongoing early childhood programs is an especially promising approach.

Children with developmental disabilities tend to have early onset of behavior problems (Singer, Ethridge, & Aldana, 2007), which are relatively stable across the preschool period and across both home and school settings (McIntyre, Blacher, & Baker, 2006). It therefore makes sense to focus early systematic, preventive efforts on reducing the risk of future behavior difficulties and family stress. Indeed, a meta-analysis revealed that parents who receive parent education in the form of parent management training and stress reductive techniques tend to have more favorable child and parent outcomes (Scott, 2008).

A range of manualised parent training, based on social learning theory (Bandura, 1971), is developed to address conduct problems in early and middle childhood, particularly for children aged 3–7 years for typically developing children. Although well validated and widely used programs are available, not many have strong empirical support. Even less empirically sound research is available for children with developmental disabilities.

Well-established Parent Training Programs

The National Institute for Health and Clinical Excellence (NICE) provides guidelines to health care professionals for best practices in the U.K. Based on best research evidence available on the clinical and cost effectiveness of parent-training/education programs in the management of children with conduct disorders, the NICE committee concluded that the Webster-Stratton Incredible Years Program and the Triple P – Positive Parenting Program have demonstrated the essential characteristics of a clinically effective parenting programs and are sufficiently effective with regard to cost. Both are also Blueprints Model Programs.

More generally, a good parenting program should be structured and have a curriculum

informed by principles of social-learning theory. The content should incorporate learning opportunities that reflect social-learning approaches, such as skills rehearsal and role play, watching recorded vignettes as triggers for discussion of alternative parenting strategies, and preparation and review of homework. In addition, it should include relationship-enhancing strategies such as play and praise and effective discipline strategies, offer sufficient sessions, with an optimum of 8–12 people, to maximize the possibility of participants deriving benefit. The teaching style should not be didactic, but should enable parents to identify their own parenting objectives, incorporate role-play during sessions, as well as homework to be undertaken between sessions, to achieve generalisation of newly rehearsed behaviors to the home situation. The program should be delivered by appropriately trained and skilled facilitators who are supervised, have access to necessary ongoing professional development and are to engage in a productive therapeutic alliance with parents. Finally, the program should adhere to the program developer's manual and employ all of the necessary materials to ensure consistent implementation of the program.

The Positive Parenting Program (Triple P)

Triple P is one of the two parenting programs recommended by the guideline of the National Institute for Health and Clinical Excellence (NICE). It is a multilevel, tiered system of prevention, parenting education, and family support, which allows for parents meeting in small groups for group-based intervention. The model integrates several levels of intervention, from a population-based preventative approach to intensive one-to-one models for parents in need of considerable support. The program introduces positive, nonviolent child management techniques to parents as an alternative to coercive parenting practices. It also emphasizes the importance of changing unrealistic or dysfunctional parental cognitions, specifically attributions and expectations in their child management, and helps parents to identify alternative explanations for their children's behaviors. Triple P aims to promote

parental competence and regards parents' development of self-regulation as the central skill, enabling parents to become independent problem solvers, with the confidence that they could solve problems themselves. Parents are also taught self-regulation skills including self-monitoring, self-determination of goals, self-evaluation of performance, and self-selection of change strategies (Lawton & Sanders, 1994).

The Positive Parenting Program (*Triple P) with Chinese Families*

A study by Leung, Sanders, Leung, Mak, and Lau (2003) examined the effectiveness of Triple P in a Chinese community for 3 to 7 year old children with early onset conduct-related problems. The Triple P materials were translated into Chinese by a bilingual clinical psychologist. Several aspects of Triple P were hypothesized to increase the likelihood of parental acceptance by Chinese families. First, the program uses a self-regulation framework in introducing parenting skills. This means that parents have considerable flexibility choosing goals and targets relating to changes in their child's and their own behavior that are meaningful for them. Hence, rather than the program simply prescribing what to do in dealing with problem behavior, parents are able to craft solutions from a range of 17 skill options introduced in the program. Second, parental concerns regarding cooperation and compliance of children with adult requests are specifically addressed in the program. Third, parents are provided with clear models and examples via video demonstrations of how to apply specific skills in their interactions with children. To determine the efficacy of the Triple P program in the Hong Kong Chinese community, an evaluation study was conducted. The program under evaluation was the level 4 group program conducted by health professionals in a public agency in Hong Kong. The results indicated that Triple P was effective in reducing disruptive child behavior problems. The effect sizes for the main measure of child outcome were $d = -.97$ and $-.90$, which is considered to be a large effect size and compares favorably to other published evaluations of Triple P using Australian families.

Crisante and Ng (2003) built on these findings by making cultural adaptations according to documented concerns in implementing the Group Triple P with Chinese parents in Australia. Three of four of their group facilitators were trained practitioners, and the approach they took was to avoid directly challenging cultural beliefs, but rather worked within the family framework and focused on changing specific parent-child interactions identified by the parents as unhelpful.

Strategies were introduced in the Level 4 (group) program to assist the Chinese parents. For instance, the ‘Ask Say Do' strategy was introduced in the second session as a way of teaching children new skills and behaviors. It involves the parent in breaking skills into parts, guiding the child through each stage, and praising mastery of any of the component skills. While Chinese parents believe that teaching children is a very significant part of their role, their reaction to this strategy was not uniformly positive. In addition, in practicing the skill of descriptive praise, the emphasis was on the parent’s feelings about the process. As the parents experienced first-hand the positive feelings associated with giving and receiving praise, the facilitator was able to highlight that if children have such positive feelings, they would likely become closer to and more cooperative with their parents. In this way, the parents shifted focus from a parent-driven to a child-centred use of praise. In this study, all scores showed a general trend towards improvement, except prosocial behavior scores showed statistically significant change post-intervention. Such null results indicated that the modification of parenting programs to assist Chinese families is a skilful art and is not yet adequately mastered by researchers. One possible explanation is that program adaptations may require experienced therapists who can assist the parents to make good clinical judgment in deciding when and how to discuss with the parents’ about how their cultural beliefs may affect their parenting approach, rather than avoid talking about the topic.

One serious problem encountered in Crisante and Ng’s (2003) study in Australia was

the parents' reluctance to complete questionnaires, due to privacy concerns that their answers might somehow be linked to government bureaucracies, thereby potentially disadvantaging their children. Therefore, the results were based on a small and perhaps biased sample of parents willing to complete the questionnaires. In any case, the study suggested that immigrant parents face unique stresses and challenges that adversely impact their ability to openly discuss about their parenting issues and to fully benefit from the parenting program. The demands of parenthood are further exacerbated when immigrant parents do not have access to extended family support networks (e.g., grandparents, trusted family friends) for advice on childrearing, or when they experience the stress of separation, divorce, or re-partnering (Lawton & Sanders, 1994; Sanders, Nicholson, & Floyd, 1997).

Another limitation of this study was that the evaluation was based on paper-and-pencil instruments, an approach that has been criticized in research with culturally diverse communities. The Chinese parents may have rated their child's behaviors more favorably in order to save face and to avoid shaming their families. Lastly, the lack of control group in this study also makes the results difficult to interpret. Moreover, it is difficult to generalize research findings on immigrant parents to parents still in their country of origins due to unique stresses that these families face when residing in a foreign country.

The Stepping Stones Triple P

The Triple P-Positive Parenting Program (Lawton & Sanders, 1994) has been adapted for families of children with developmental disabilities. The Stepping Stones Triple P (Cummings & Wittenberg, 2008) was evaluated in a randomized clinical trial with parents of preschool-aged children having developmental disabilities and problem behaviors. Training was associated with reduced levels of child problem behavior, improved maternal and paternal parenting style, and lower levels of maternal stress as compared with a waitlist control group. Effects were maintained at 6-month follow-up.

In a study by Whittingham, Sofronoff, Sheffield, & Sanders (2009), the parents of children between age 2 and 9 with high-functioning autism (ASD) participated in The Stepping Stones Triple P program, the results suggested that the program was effective for parents of children with ASD – in managing parent-reported child behavior problems and also parent-reported dysfunctional parenting styles.

Plant and Sanders (2007) compared the effectiveness of an adjunctive intervention, Stepping Stones Triple P-Enhanced (SSTP-E) program with a standard individual triple P intervention program, (SSTP-S; Cummings and Wittenberg, 2008) and a waitlist (WL) control group for preschoolers with developmental disabilities. While both the standard and enhanced interventions were associated with positive changes in child behavior, there was only partial support for the hypotheses suggesting that the enhanced intervention (SSTP-E) was superior to the standard behavioral parent training intervention (SSTP-S) on outcome measures. Instead, both interventions were found to be equally effective in producing positive changes in child and parent behavior.

The parent training programs for children with developmental disabilities highlighted in this review thus far aim at decreasing problem behavior. They focus on children with already elevated behavior problems or established behavior disorders (Plant & Sanders, 2007), target older children, (Hudson et al., 2003), or use individualized approaches based on functional analyses of behavior (Lerman, Swiezy, Perkins-Parks, & Roane, 2000). Few programs focus on prevention or early intervention of behavior problems using a group-based training approach for families with preschoolers with developmental disabilities. In addition, although parent training is an important starting place for reducing conduct problems, promoting social and emotional competence also deserves attention.

The rich and growing science of early emotional and social development must be incorporated into services to support parents who are struggling to manage routine behavioral

difficulties in their young children, as well as those who are trying to figure out whether, when, and how to deal with more serious social or emotional problems (National Scientific Council on the Developing Child, 2004).

The Incredible Years Parent Training (IYPT)

The Incredible Years parent training program was developed in 1980 as an interactive, videotape-based parent intervention (BASIC) for parents of children ages 2–7 years. In 2008, the program has been revised and updated to include four separate age range BASIC programs: infant (0-1years), toddler (1-3 years), preschool (3-6 years) and school age (6-13 years). The foundation of the program is video vignettes of modeled parenting skills (over 300 vignettes, each lasting approximately 1–3 minutes) shown by a therapist to groups of 8–12 parents. The videos demonstrate social learning and child development principles and serve as the stimulus for focused discussions, problem solving, and collaborative learning. The program is also designed to help parents understand typical child development and temperaments (Webster-Stratton and Reid, 2010).

The BASIC pre-school program begins with a focus on enhancing positive relationships between parents and children by teaching parents to use child-directed interactive play, academic and persistence coaching, social and emotional coaching, praise, and incentive programs. Next, parents learn how to set up predicable home routines and rules, followed by learning a specific set of nonviolent discipline techniques including monitoring, ignoring, commands, natural and logical consequences, and ways to use Time-Out to teach children to calm down. Finally, parents are taught how they can teach their children problem-solving skills (Webster-Stratton and Reid, 2010).

The efficacy of the Incredible Years BASIC parent treatment program for children (ages 3–8 years) diagnosed with Oppositional Defiant Disorder/Conduct Disorder has been demonstrated in seven published randomized control group trials by the program developer

and colleagues at a university setting (Reid, Webster-Stratton, & Hammond, 2007; Webster-Stratton, 1981; Webster-Stratton, 1982, 1984, 1990a, 1992, 1994, 1998; Webster-Stratton & Hammond, 1997; Webster-Stratton, Hollinsworth, & Kolpacoff, 1989; Webster-Stratton, Kolpacoff, & Hollinsworth, 1988; Webster-Stratton, Reid, & Hammond, 2004). In all of these studies, the BASIC program has been shown to improve parental attitudes and parent–child interactions and reduce harsh discipline and child conduct problems compared to both wait-list control groups.

The BASIC program has been replicated in five projects by independent investigators in mental health clinics with families of children diagnosed with conduct problems (Drugli & Larsson, 2006; Lavigne et al., 2008; Larsson et al., 2008; Scott, Spender, Doolan, Jacobs, & Aspland, 2001; Spaccarelli, Cotler, & Penman, 1992; Taylor, Schmidt, Pepler, & Hodgins, 1998) as well as with indicated populations (children with symptoms) and high risk populations (families in poverty) (Gardner, Burton, & Klimes, 2006) (Gross et al., 2003; Hutchings et al., 2007; Brotman et al., 2003). These replications were "effectiveness" trials done in applied mental health settings, not a university research clinic, and the therapists were typical therapists at the centers. Three of the above replications were conducted in the United States, two in United Kingdom, and one in Norway. This illustrates the transportability of the BASIC parenting program to other cultures and in real-world settings.

In addition, the parent programs as a selective prevention program with multiethnic, socioeconomically disadvantaged families was evaluated in two randomized studies with Head Start families. Results of these studies suggest the program's effectiveness as method of preventing the development of conduct problems and strengthening social competence in preschool children (Webster-Stratton, 1998; Webster-Stratton, Reid, & Hammond, 2001). A recent study with elementary school children evaluated the effects of the parent intervention

with an indicated, culturally diverse population. Children who received the intervention showed fewer externalizing problems, better emotion regulation, and stronger parent-child bonding than control children. Mothers in the intervention group showed more supportive and less coercive parenting than control mothers (Reid, Webster-Stratton, & Hammond, 2007). Similar results were reported by independent investigators with selective and indicated populations (Gardner, Burton, & Klimes, 2006; Gross et al., 2003; Hutchings & Gardner, 2006; Linares, Montalto, Li, & Oza, 2006; Brotman et al., 2003).

The effectiveness of the Incredible Years program has been found to be maintained at one year (Webster-Stratton, Hollingsworth and Kolpacoff, 1989) and two year follow-ups (Reid, Webster-Stratton and Hammond, 2003) for children with for children with behavioral problems at university clinics. The results have been replicated by Scott (2005), who conducted a study to examine the lasting effects of the parenting program in a real life, regular clinical practice setting in four local child and adolescent mental health services, U.K. Both immediately following treatment and at one year follow-up, there was a large reduction in antisocial behavior, original gains in hyperactivity were maintained. There were also continued improvements in emotional symptoms. No changes between the experimental and control group was detected for peer relationship problems both immediately and after a one year delay. This study suggests that the treatment gain is maintained for at least one year for children with anti-social behaviors even when deployed in "real life" everyday clinical conditions.

Similar findings were found by Hutchings et al., 2007 study for parents from socially disadvantaged areas from eleven Sure Start areas in north and mid-Wales. The findings showed that compared with the control group, there was an increase in positive parenting for parents who attended a 12 week Incredible Years pre-school basic parent program and reduced problem behavior in children at risk for developing conduct disorder at a 1-year

follow-up, not only through subjective parental report but also by more objective direct observation in the home. Furthermore, change in positive parenting skill appeared to partially and significantly mediate change in observed child problem behavior, whereas change in parent mood or sense of competence did not contribute to child outcome. These data provide some support that skills change in parenting practices may be salient ingredient of effective parenting programs, rather than changes in parental mood or confidence.

The most recent maintenance study was conducted in New Zealand (Sturrock et al. 2014). The longitudinal study investigated the outcomes for 28–32 months old children with conduct problems and parents. The key finding of the study is that the IYPT program outcomes on child behavior, parenting practices and relationships and family context items were maintained over the 30-month follow-up with no diminution in the size of effects for almost all of the outcome measures. The results confirm that the program effectiveness is robust and the effects continued to persist for up to 30 months.

Adapting the Program for Chinese Parents

Less research has been conducted with applying the Incredible Years Parent Program to the Asian population. Discourse on the application of parent training for ethnic minority families has enumerated potential cultural barriers to engage parents whose own socialization experiences fall outside middle-class European American heritage.

Lau, Fung, and Yung (2010) found that even though high-risk immigrant Chinese parents in the United States can be effectively engaged in group parent training, they value traditional forms of hierarchical parental control and are more likely to use physical punishment in response to acculturation conflicts. Viewing an acculturating child's bids for autonomy through a traditional lens that favours parental authority, parents will likely make negative affect and antagonistic attributions, fuelling punitive parenting.

Lau, Fung, Ho, Liu, and Gudiño (2011) further found that Chinese parents objected to ignoring misbehavior based on principles of differential reinforcement. Chinese parents also objected to tangible rewards for compliance because Confucian teaching assumes that good behaviors are expected and need not to be taught. Likewise, other interventionists have noted that praise is problematic for Chinese parents owing to cultural beliefs that praising children for accomplishments will result in lack of humility and decrease effort to do better (Crisante & Ng, 2003; Yang, Soong, Chiang, & Chen, 2000). Among Chinese-American immigrants, low levels of acculturation and endorsement of traditional Chinese child-rearing values concerning strict discipline and shaming are associated with lower perceived acceptability of parent training (Gudiño, Lau, Yeh, McCabe, & Hough, 2009).

Some Chinese American parents hold beliefs about motivation that contraindicate praise and favor criticism (Lau et al., 2010). The frequent East Asian belief that ‘‘children will stop trying hard if you praise them’’ highlights a self-improving orientation, in which criticism of performance motivates persistence among East Asians, while Americans tend to hold a self-enhancing orientation that prioritizes maintaining self-esteem (Heine et al., 2001). Like other groups, Chinese American parents often object to the strategy of ignoring misbehavior, because of the potential for loss of face by failing to correct shameful child behavior swiftly and publicly. Culturally competent parenting programs must responsively address concerns about cultural incongruence of target techniques. However, motivational enhancements to address cultural concerns among immigrant Chinese parents may not be sufficient without highly supportive instruction for novel techniques. Even when reticence or resistance is overcome, motivated immigrant parents may still encounter difficulties in acquiring parenting skills. Immigrant Chinese parents may need additional support in learning certain techniques that are culturally foreign (Lau et al., 2010). Modeling, enactment, rehearsal, and monitoring of parents' use of parent training techniques are essential. Thus,

engagement must involve (a) exploring cultural misgivings about parenting training, (b) cultivating a working alliance to motivate change toward the parents' valued goals, and (c) supporting acquisition of culturally novel parenting behaviors.

Some researchers suggested that an increased dose of parent training may be necessary for immigrant parents to master parenting skills (Gardner et al., 2006; Gross et al., 1995). This may be due to difficulty of ''buying into'' culturally unfamiliar techniques or requiring more practice to master novel skills. Yang et al. (2000) noted that even when initial resistance to using praise had been overcome, there was still considerable difficulty in teaching Hong Kong Chinese parents to praise their children. They found it necessary to bolster their instruction with the use of videotaped feedback and immediate reinforcement with live coaching. Some parents refused to praise, but those who tried used praise in a ''mechanistic and unemotional manner,'' probably limiting its effectiveness.

Chinese Australian parents needed extended practice of the unfamiliar behaviors of giving and receiving praise in role play until they really understood the intention to evoke positive affect (Crisante & Ng, 2003). Overall, this line of research indicates that parent training can be effective with Chinese parents when barriers to engagement are addressed and behavioral rehearsal is buttressed.

Others have suggested that Chinese parents need a locally developed program to suit their cultures. The Hands-On Parent Empowerment program (HOPE program; Leung, Tsang, Dean, and Chow (2009), for instance, is an early intervention program for new immigrant parents from Mainland China with preschool children. The target sample was new immigrant parents with preschool children, low income, low education level, a large age gap between husband and wife, high parenting stress and problems with their children's learning. The program consisted of 30 weekly sessions on language and reading, preschool concepts, and

behavior management techniques. The program details can be found in Leung, Tsang, Dean, and Chow (2009). For working parents in Hong Kong, a 30-session program may not be feasible for wide adoption program was therefore fine-tuned and shortened to 20 sessions for two-year-old children in nursery schools. At post-intervention, the children in the intervention group showed significant improvement in their mastery of preschool concepts and language skills. The intervention-group parents reported fewer child behavior problems, lower parental stress and higher parenting sense of competence (Leung & Tsang, 2012). Still, 20 sessions would be practically very difficult for many working parents in Hong Kong.

In summary, these findings suggest that although Chinese-speaking families can benefit from parenting programs, the dosage of the intervention that they require may not be the same as that for families endorsing Western values. They may need more intense intervention for specific topic that are counter-cultural, e.g. play, praise and reward, and less intense intervention for other topics that better match with their cultural values, e.g. limit-setting.

More insights about the cultural adaptation of the Incredible Years Parenting Training (IYPT) can be gained from studying its implementation in a similar Asian culture, such as Korean American. Traditional Korean American discipline is characterized by a lack of expression of affection and use of harsh discipline. In a pilot study in Korea (Kim et al., 2008), the IYPT was effective in expanding Korean American mothers' scope of parenting strategies as compared to the control-group mothers. Specifically, intervention-group mothers used significantly more positive discipline both immediately after completing the program and 1 year after intervention. There were no group differences in other study variables (e.g., appropriate discipline, harsh discipline, children's behavioral problems, and social competence). Mothers in neither group increased their use of appropriate discipline. Immediately after the intervention, most of the mothers indicated that positive discipline

techniques were easy to use (e.g., 85% for praise and 95% for rewards) and useful (e.g., 100% for praise and 80% for reward). However, only 44% of mothers perceived appropriate discipline as easy to use (e.g., timeouts and consequences), although over 70% of mothers perceived them as useful. Importantly, the intervention-group mothers used significantly more appropriate discipline one year after the intervention, whereas no changes occurred in control group mothers. This suggests the mothers may require more time to practice the challenging disciplinary strategies.

All intervention-group mothers benefited from learning positive discipline; however, low-acculturated Korean mothers in the U.S. were more receptive to decreasing harsh discipline, while high-acculturated mothers were more open to adopting discipline strategies considered appropriate in the U.S. Perhaps when mothers were not familiar with American culture, it was easier for them to stop using discipline strategies they were accustomed to but turned out to be ineffective. However, learning discipline techniques in a new culture might not guarantee its application, which requires not only understanding of discipline techniques but also dealing with cultural barriers. For example, timeout is a technique that allows children to self-regulate their emotion, which is based on the view of a child as an independent human being responsible for one's own behaviors. However, Korean American mothers view their child as a dependent human being, and parents feel responsible for regulating their child's behaviors. Therefore, learning the timeout technique may be more difficult for low-acculturated Korean American mothers as they may not understand the American culture underpinning timeouts. This speculation is supported by the fact that mothers who were familiar with the American culture will adopt a new strategy appropriate to their new culture more readily.

The Incredible Years has been adapted for caregivers of preschool-age children with developmental disabilities by McIntyre (2008a, 2008b). The developmentally adapted version

of the parent training intervention was superior to care-as-usual for young children with developmental delays or disabilities – in reducing negative and inappropriate parent–child interactions and child behavior problems (McIntyre, 2008b). Negative parent-child interactions consisted of a composite of seven inappropriate behavior categories: inappropriate play behavior, intrusion on child's independence, positive consequences for child's inappropriate behaviors, inappropriate. A large effect size for reducing observed inappropriate behaviors and small effect size for reducing parent-reported child behavior problems was found. However, these intervention-group parents did not exhibit more child-directed praise in this study.

Similar effects were found in a randomized trial with parents of Portuguese preschoolers with Attention Deficit Hyperactivity Disorder (ADHD) behaviors (Azevedo, Seabra-Santos, Gaspar, & Homem, 2013). Ten measures were used to rate children's ADHD behaviors, including reports from mothers, reports from teachers, and direct observation of parent-child interaction during a laboratory task. Eight measures of parenting, including mothers' self-reports and behaviors observed in the lab, were used. Following 14 sessions of the Incredible Years Parent Training Program (IYPT), 43% of the children whose parents participated in IYPT had clinically significant improvements in their ADHD symptoms, compared to 11% of the waitlisted group. Six months after the start of the study, IYPT still made a difference for children's behavior on several measures. Most of the benefits for both children and mothers continued to persist a year after program onset (Azevedo, Seabra-Santos, Gaspar, & Homem, 2014). One exception was the lab observation of parents' coaching techniques. Coaching had improved among experimental mothers after the program, but at the 12-month follow-up these skills were rated as worse than at baseline. The researchers speculated that a longer program, or more work specifically on coaching, would be necessary to develop and sustain these skills. Most of the intervention groups met in a

university community facility, conducted by six IYPT facilitators each had at least 10 years of prior experience in clinical child psychology or psychiatry, went through IYPT accreditation training, had run pilot groups, and had ongoing support from IYPT trainers. While experienced and well-supported leaders may help to explain the positive results from this trial, questions remain regarding the effectiveness and feasibility of such programs if it is translated, adapted, applied and evaluated in the real-world community setting with realistic limitations in staff resources and funding.

To date, the effectiveness of the Incredible Years Parent Training program has not been evaluated with Chinese parents with developmental disabilities in Hong Kong. To better understand early intervention for children with developmental disabilities, this study was designed to evaluate the effectiveness of the Incredible Years Basic Parent Training program in coaching parents to promote the development of their children, targeting areas of deficits for children with developmental disabilities, such as social skills, language and adaptive behaviors during play interaction with their child.

Summary and Implications

In sum, this literature review suggests that many parenting interventions for reducing child problem behavior have been found to be efficacious in randomized controlled trials. Many of these interventions have been tested in ‘‘efficacy’’ trials, under the relatively ideal conditions of a specialist or research clinic. Recently, because of the importance of informing prevention policy, there has been increasing interest in testing these programs in ‘‘effectiveness’’ trials in real world settings.

The current research investigates the effectiveness of The Incredible Years Parenting Program in a busy clinic in of Hong Kong with a mixed group of children with developmental disabilities, multicultural parents who speak Cantonese, and only one

Cantonese speaking clinical psychologist. The research questions were: 1) Will the Incredible Years Parenting Program be effective in reducing the stress for these Chinese parents?

2) Will the program promote parental encouragement of children's developmental abilities (Webster-Stratton & Reid, 2003), for parents of 3-6 year-old children with developmental disabilities in the busy clinic in Hong Kong? 3) Will the program be culturally accepted? 4) Which training topics will these parents find most and least useful. 5) What types of families will benefit most? Clinically, these questions are helpful in identifying with greater precision the types of clients for whom this intervention may be particularly suitable, and conversely, the subgroups for whom extra therapeutic effort may be needed.

Chapter 3: Research Design

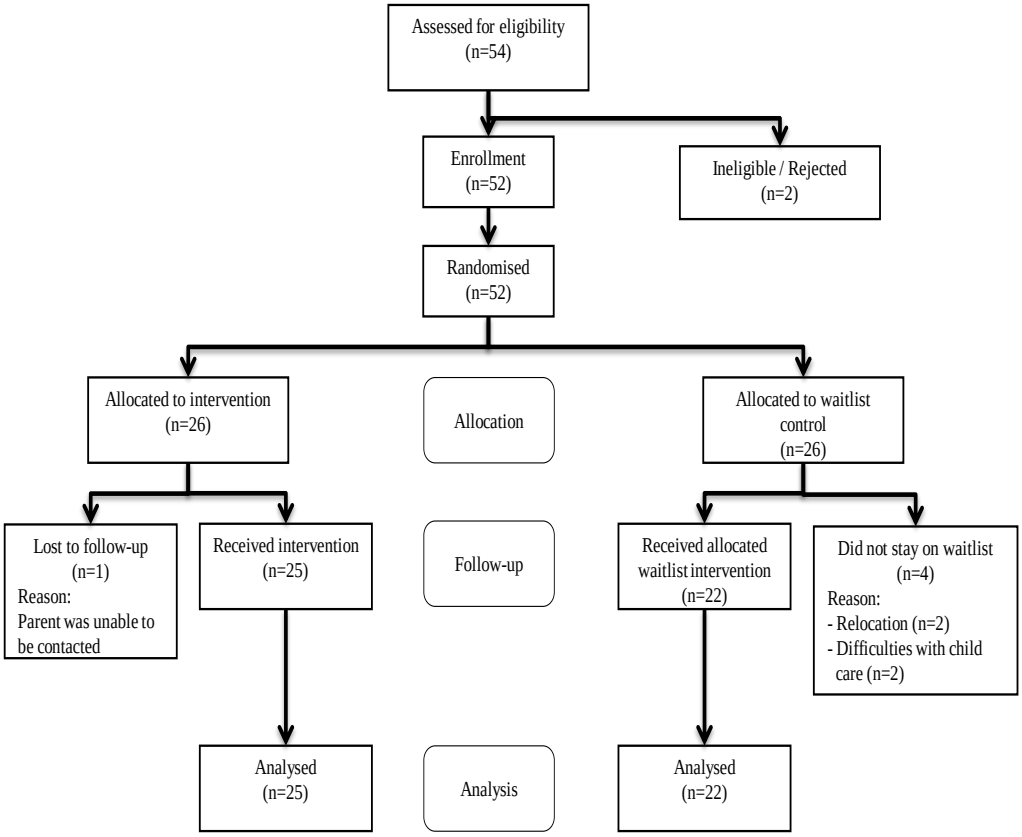
Methodology

Parents were randomly assigned to the experimental group or a wait-listed control group. The decision to use a waitlist control group was in part based on ethical considerations. Due to centre policy, it was not possible to withhold treatment completely and therefore deprive clients of services. The waitlist allowed clients in the delayed condition to be offered the service at a later time.

Prior to and at the conclusion of the 12 weekly treatment sessions, parents were assessed using the Dyadic Parent-Child Interaction Coding System (DPICS) developed by Eyberg, Nelson, Duke and Boggs (2004). Parents were asked to fill out several questionnaires such as a Childhood History Form, Child Behavior Checklist, Parenting Stress Index-Short Form, Home Observation for Measurement of the Environment (HOME-life Interview) and the acculturation questionnaire.

The experimental group attended treatment in small groups consisting of 8-12 parents. The wait-list control group participants were assessed twice prior to the commencing treatment, with an interval of about four months.

Figure 1. Flowchart of the Research Procedures



Research Design

Participant Selection Criteria

Selection criteria included Parents of Pre-school Children with Autism Spectrum Disorder, Developmental Delay (speech, social, cognitive and/or physical), Asperger's syndrome, Attention-Deficit Hyperactivity Disorder, Pervasive Developmental Disorder and/or Children with intellectual disabilities.

Measures

The Childhood History Form

The Childhood History Form was developed for this study. It was to be filled out with input from parents prior to the first contact. It elicited demographic information, including the child's details (sex and date of birth), parent's age, marital status, relationship to the child, country of birth, current employment status, educational background, and whether they received government benefits for receiving child services.

Dyadic Parent Child Interaction Coding System (DPICS)

The DPICS system (Eyberg, Nelson, Duke, & Boggs, 2004) was designed to assess the quality of parent-child interactions through observations of dyads in the clinical setting. DPICS III was used in this study. Variables were added to better assess the effectiveness of the parenting program for parents of children with special educational needs. Because no such coding scheme existed for this population at the start of the study, we added a set of relevant dependent variables.

The parent and child were videotaped – for subsequent coding – in three standard situations that varied in the degree to which parental control is required. Eight parent categories which were coded for each of the three phases: Negative talk (NTA), Direct command, Indirect command (IC), Labeled praise (LP), Unlabeled praise (UP), Joint attention initiated (PJI), Joint attention responded (PJR), and Verbal responsiveness (VR). Five child categories were coded: Compliance, Non-compliance (NC), Joint attention initiated (CJI), Jointed attention responded (CJR) and Affect (AFFECT).

Coding of parent and child interactions was accomplished using The Observer XT (Version 11) software by Noldus (www. Noldus.com), this is a software system for recording, coding and analyzing frequencies and durations of observed events which provided online, continuous, computer-assisted behavioral coding of variables. Behaviors

were coded by trained and supervised independent observers, blind to experimental conditions and the recording time points (baseline versus post intervention/waitlist-period). Six coders separately viewed the videotapes in real time; they were able to stop and replay segments, as well as edit their coding. Three coders independently coded parent interactions, and three coders independently coded child interactions.

In order to assess inter-rater reliability, coders were trained on the same 10 videos. The inter-coder reliability among the three independent coders was high (intraclass $R > 0.8$). Once inter-coder reliability was established, all three coders proceeded to code all of the remaining videotapes independently and the mean of the three coders' scores was used in subsequent data analysis (intraclass $R = 0.999$ for parent coding and $R = 0.998$ for child coding).

Coding variables selected from *Dyadic Parent-child Interaction Coding System: Abbreviated Version (3rd Edition; DPIC-III; Eyberg, Nelson, Duke, & Boggs, 2009)* are listed here.

Negative Talk (NTA)

Negative talk was defined as a verbal expression of disapproval of the child or the child's attributes, activities, products, or choices. Negative talk also included sassy, sarcastic, rude, or impudent speech.

Commands

Commands were statements in which the speaker (parent or child) directs the vocal or motor behavior of the other. Commands could be direct or indirect in form.

Direct Commands (DC)

Direct commands were declarative statements that contain an order or direction for a vocal or motor behavior performed, and indicated that the child is to perform this behavior.

Indirect Command

An Indirect Command was a suggestion for a vocal or motor behavior performed that was implied or stated in question form.

Praise

Praise was a verbalization expressing a favourable judgment of an attribute, product, or behavior of the child. There were two types of praise: Labeled and Unlabeled Praise. Labeled Praise for coded.

Labeled Praise

Labeled praise provided a positive evaluation of a specific behavior, activity, or product of the child.

Unlabeled Praise (UP)

An unlabeled praise provided a positive evaluation of the child, an attribute of the child, or a non-specific activity, behavior, or product of the child.

Responses to Commands

After the parent issued a command, the child had five seconds to respond. There were two categories describing responses to commands: Compliance was coded when the command was obeyed or beginning to be obeyed within the 5-second interval. Noncompliance was coded when the command was not obeyed or attempted within 5-seconds or when a behavior incompatible with the command was performed.

Compliance (CO)

Child compliance occurred when the child performed, began to perform, or attempted to perform a behavior requested by the parent within the 5-second interval following the command.

Non-compliance (NC)

Noncompliance was coded following a Direct or Indirect Command given by the parent when the child did not perform, did not attempt to perform, or stopped his/her attempt to perform the requested behavior within the 5-second interval following the command.

Affect (AFFECT)

Affect was defined as the emotional tone of the child's behaviors and was coded on the basis of nonverbal gestures, body posture, facial expressions, and tone of voice and inflections. At the end of every phase, coders paused and rated child affect on a 3-point scale: negative (0), neutral (1) and positive (2).

New variables added for parents with parent-child dyads for children with special needs included:

Joint Attention

Joint attention skills is a specific type of social skill and it involved sharing attention with others through pointing, showing, and coordinated looks between objects and people. Joint attention was coded as an overall score for joint attention for phase one and two according to the frequency of the elements just listed. A score of zero was given when no joint attention was exhibited. A score of one was given when there were one to two incidences of jointed attention, and a score of two was given when three or more incidences of joint attention were observed.

Table 1.1
Definitions of Parent's Joint Attention Skills

Initiated by parent joint attention (PJI):	
Coordinated Joint Look	Parent looks between child and a toy to share attention. No more than 3 seconds must separate the look between the toy and the adult.
Showing	Parent has object in hand and holds it towards child to share attention. Parent does not give toy to child.
Give to share	Parent gives toy to child. The parent must make a clear attempt to give the toy to the child. Just a general thrust or throw in the direction of the child is not acceptable. Parent gives purely to share, e.g. for a child to look at a toy or for child to take a turn with a toy.
Proximal Point	Parent points to an object within 4 inches of object purely to share interest with the child. Parent's finger does not need to be touching object.
Distal Point	Parent points to an object which is more than 4 inches away from pointing finger purely to share interest with the child. Parent does not want child to act on the toy.
Responded by parent joint attention (PJR):	
Following proximal point	After child points (to object within 4 inches of pointing finger), parent responds with an attentional focus. The parent's eye-gaze shifts to focus on the object that the child is pointing to.
Following distal point	Parent follows child distal point (at least 4 inches away from object). The parent's eye-gaze shifts to focus on the object that the child is pointing to.

Note. Adapted from "Joint Attention and Symbolic Play in Young Children with Autism: A Randomized Controlled Intervention Study," by C. Kasari, S. Freeman, and T. Paparella, 2006, *Journal of Child Psychology and Psychiatry, 47, p.619*.

Table 1.2

Definition and Examples of the Parent Verbal Responsiveness (VR) Variables

Code	Definition	Example
0= Ignore	Makes no attempt to respond to child's communication acts	No response
1= Irrelevant	Responds to child's communication acts but does not follow the relevant topic	Child is holding ball. Parent: "the weather is wonderful today."
2= Relevant response Repeat	The frequency with which the parent responded verbally to child acts of spoken communication by repeating all or part of the child's previous utterance.	Child: "Big ball." Parent: "Big ball." Child: "My hat." Parent: "Hat."
3= Elaborate response Follow-in commenting	Frequency of 5-s intervals of child active, object-focused engagement during which the parent provided verbal language that followed into the child's current focus of attention and described what the child was looking at or playing with, without conveying the expectation that the child do something different or respond verbally to the parent.	Child plays with toy piano. Parent: "Pretty music!" Child feeds baby. Parent: "Baby is hungry!" Child pushes truck up ramp. Parent: "Red truck is going up!" Child watches parent hammer ball. Parent: "Mommy is pounding."

Follow-in directive	Frequency of 5-s intervals of child active, object-focused engagement during which the parent provided verbal language that followed into the child's current focus of attention and conveyed a request that the child change some aspect of their play with the toys.	Child is holding ball. Parent: "Roll the ball to me!" Child puts horse in barn. Parent: "Now, put the cow in the barn!"
Linguistic mapping	The frequency with which the parent responds verbally to child nonverbal acts of intentional communication by putting into words the noun, verb, or qualifier that represents the presumed meaning of the child's act.	Child reaches for red ball with look to parent. Parent: "You want the red ball!" Child shows cow to parent. Parent: "Brown cow!"
Expansion	The frequency with which the parent responds verbally to child acts of spoken communication by adding semantic or grammatical information to the child's previous utterance.	Child: "Ball." Parent: "Yellow ball." Child: "Up." Parent: "Car is going up." Child: "Eat." Parent: "Baby is eating."

Note. Adapted from "Types of Parent Verbal Responsiveness that Predict Language in Young Children with Autism Spectrum Disorder*,"* by A. McDuffie and P. Yoder, 2010, *Journal of Speech, Language and Hearing Research, 53*, p.1032.

Table 1.3
Definitions of Child's Joint Attention Skills

Initiated by child joint attention (CJI):	
Coordinated joint look	Child looks between adult and a toy to share attention. No more than 3 seconds must separate the look between the toy and the adult.
Showing	Child has object in hand and holds it towards adult to share attention. Child does not give toy to adult.
Give to share	Child gives toy to adult. The child must make a clear attempt to give the toy to the adult. Just a general thrust or throw in the direction of the adult is not acceptable. Child does not want adult help. Child gives purely to share, e.g. for adult to look at a toy or for adult to take a turn with a toy.
Proximal point	Child points to an object within 4 inches of object purely to share interest with the adult. Child's finger does not need to be touching object.
Distal point	Child points to an object which is more than 4 inches away from pointing finger purely to share interest with the adult. Child does not want adult to act on the object.
Responded by child joint attention (CJR):	
Following proximal point	After adult points (to object within 4 inches of pointing finger), child responds with an attentional focus. The child's eye-gaze shifts to focus on the object that the adult is pointing to.
Following distal point	Child follows adult distal point (at least 4 inches away from object). The child's eye-gaze shifts to focus on the object that the adult is pointing to.

Note. Adapted from "Types of Parent Verbal Responsiveness that Predict Language in Young Children with Autism Spectrum Disorder*,"* by A. McDuffie and P. Yoder, 2010, *Journal of Speech, Language and Hearing Research, 53*, p.1032.

Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001)

Child behavior problems (oppositional defiant disorder subscale) was assessed using parent reports on the Child Behavior Checklist, which was administered to both the parent

and also another family member (Achenbach & Rescorla, 2001).The Child Behavior Checklist (CBCL) is an assessment that measures the frequency and extent to which children display different behaviors. The Chinese version of the questionnaires (Leung et al., 2006), with published internal consistency estimates of alphas .80 and .83 for the internalizing and externalizing subscales respectively (Yang et al., 2000), was used in this study. Test– retest reliability estimates were in the .80 range across the CBCL subscales when used in a Chinese sample.

Parenting Stress Index–Short Form (PSI-SF; Abidin, 1995)

The Parenting Stress Index–Short Form (PSI-SF; Abidin, 1995) is a 36-item scale for measuring parental distress. The scale consists of three factors of parenting stress; Parental distress (PD), which measures the impaired sense of parental competence and depression; parent-child dysfunctional interaction (PCDI), which measures dissatisfaction with the parent-child interaction; and difficult child (DC), which measures the behavioral characteristics of the child. A total score was calculated, with a higher score representing a higher level of parenting stress. The Chinese version of the PSI-SF, validated in research on maltreating samples of parents in Hong Kong, was used (Chan, 1994; Tam, Chan, & Wong, 1994).

HOME-Life Interview (Leventhal, Selner-O'Hagan, Brooks-Gunn, Bingenheimer, & Earls, 2004)

The Project on Human Development in Chicago Neighbourhoods (PHDCN) version of the Home Observation for Measurement of the Environment (HOME) (Leventhal et al., 2004) is a semi-structured interview in which the primary caregiver was asked about daily routines, other activities, and ways that the home environment was structured to accommodate the child's needs. The PHDCN Scientific Directors revised the original HOME to facilitate the standard assessment of home environments of children of all ages and named

the instrument HOME and Life Interview. The instrument sought to assess the parenting and the home environments. The subscales relating to parental lack of hostility, access to reading materials and activities/outings were selected to be rated by parents in the present study. The scales that comprise the PHDCN HOME-life Interview grew out of theoretical and empirical work on social environmental influences on child development, and many important domains of parenting and home environment. Higher scores indicate better developmental support and are associated with positive child development.

Acculturation Questionnaire

Acculturation was defined using two constructs: the bicultural self and social identity (Chen, Benet-Martínez, & Harris Bond, 2008; Ng & Lai, 2011). The construct of Bicultural Identity Integration (BII) captures variations among bicultural individuals in the degree to which they ‘‘perceive their mainstream and ethnic cultural identities as compatible and integrated vs. oppositional and difficult to integrate’’ (p. 9).

Bicultural individuals high on Bicultural Identity Integration are able to identify with both cultural systems without feeling conflictual or requiring dissociation. They also display higher levels of identification with, and linguistic fluency in, the mainstream culture, even though competence in their ethnic culture of origin is often similar between these two types of bicultural individuals.

Social identity refers to which culture (Western vs. Eastern) the parents identify more with (Ng & Lai, 2011). A high score indicates identification with the Chinese culture, whereas a low score indicates identification with the West.

Weekly Home-practice Evaluation

Prior to the start of every session, parents reported on: how well they felt they understood, how frequently they used, how confident they felt, and how useful they found the techniques. In addition, they were asked how frequently they used and how useful they found

previously taught technique(s) useful in the previous week. Parents rated the statements from strongly disagree to strongly agree (rating of 1 to 5). Half way and at the end of the program, parents were asked these two questions again to monitor their ongoing application of techniques.

Client Satisfaction Questionnaire

Client satisfaction ratings regarding the helpfulness of the session content, vignettes, the clinician, group discussions and the role play were collected after the each session. Parents responded using a 4 point Likert scale.

Final Satisfaction Questionnaire

Client satisfaction ratings regarding how the parents found the sessions overall were collected at post-assessment.

Procedure and Timeline

The study received research ethics approval from both the University of Hong Kong and the clinical site the Child Development Centre. Children were recruited through teachers and health care professionals. Families that might be eligible and interested in the study were sent an information packet, which included a cover letter describing the study, a demographic questionnaire, a registration form and an informed consent form.

Children who were previously diagnosed with developmental delay were scheduled for a screening evaluation at the Wan Chai centre of the Child Development Centre. Developmental delay is a term commonly applied to a preschool child whose developmental level is substantially behind the average expectation of children of similar age in two or more developmental domains, including cognitive and intellectual, gross motor, fine motor, language, social and adaptive development (Petersen, Kube and Palmer, 1998). Children were diagnosed and referred to the Child Development Centre by psychologists or paediatrician via the government service or by private practitioners. A battery of standardised

assessment tools used in Hong Kong for the current population commonly include, but are not limited to the following tests. The Wechsler Pre-school and Primary Scale of Intelligence-Revised- Chinese Version to assess for intellectual functioning (WPPSI-R-Chinese; Chen and Chen, 2000). Developmental age was estimated using Griffiths Mental Developmental Scales (GMDS) by the developmental paediatrician (Griffith, 1984). The Hong Kong Based Adaptive Behavior Scale (Kwok, Shek, Tse, & Chan, 1989), which was modeled after the Vineland Adaptive Behavior Scale (Sparrow, Balla, & Cicchetti, 1984) to yield supplementary information on children's socio-cognitive functioning. A combination of the Autism Diagnostic Observation Schedule (ADOS; Lord et al., 2001) and Autism Diagnostic Interview-Revised (ADI-R; Lord, Rutter, & Le Couteur, 1994) are used to guide clinical observations for the diagnosis of children with Autism and Aspergers Syndrome. The DSM-IV-TR (American Psychiatric Association, 2000, Diagnostic and statistical manual of mental disorders (4th ed., text revision). Washington, DC: Author.) was the version used for diagnoses at the time this project was conducted. Families of children without formal proof of diagnoses were sent information on other resources in the community.

The Wan Chai centre of the Child Development Centre was selected because it is more accessible by public transport, as compared to the other centre which was located at The Peak.

Treatment Integrity

The program was conducted by a bi-lingual Clinical Psychologist with 5 years of clinical experience at the start of the study. Two group facilitators, supervised weekly by the Clinical Psychologist, assisted in role-play enactments, video-taping of group sessions and notes-taking during group discussions. They had university education in Psychology from the University of Hong Kong.

All the intervention sessions delivered were videotaped for weekly self-evaluation and for regular peer supervision. The Clinician received support and consultation from professors in the areas of clinical psychology and developmental psychology at the University of Hong Kong on a needs basis. To ensure the program was implemented as intended, the Incredible Years program manual (updated and revised by Webster-Stratton in 2008) was closely followed, standardized materials and translated handouts for all parents were provided, weekly session checklists for all delivered session were completed for monitoring protocol adherence (see Appendix E for checklist), and peer and self-evaluation questionnaires were reviewed (see Appendix F for questionnaire). One hundred percent of the planned intervention components were implemented in all the groups as intended.

All parents were told that at the outset at the pre-assessment session and again in the first session that the therapeutic alliance was interactive and collaborative. All sessions involved discussion of vignettes, role plays and homework. Written homework was collected from parents before every session and homework feedbacks that were collected from the parents at the previous session were returned to the parents. Refreshments were provided to parents during the sessions. Parents completed the weekly parent-satisfaction questionnaires to check parents' participation and engagement in the program and treatment delivery (e.g., satisfaction with content, vignettes, facilitator, discussion, role- play and homework compliance). The results are recorded in Tables 6.1 and 6.2.

Program Outline

Table 2
Course Outline

Lesson	Topics	Core Content
1	Child-directed Play Strengthens Parent-child Relationships	• Increase parents' understanding, empathy, and acceptance of their child's temperament and developmental stage. • Increase parents' positive and decrease negative attributions about their child and promote realistic expectations for child development.
2	Child-directed Play Academic and Persistence Coaching	• Discuss academic pressures facing parents in HK and stress on families with children with developmental delay (DD). • Psychoeducation on the appropriate cognitive developmental milestones for 3-6 year old children. • Consider child's current cognitive developmental level, interests and support needs. When viewing vignettes, consider which techniques apply to children with DD to scaffold his or her development
3	Academic and Persistence Coaching	• Psychoeducation on the appropriate language developmental milestones for 3-6 year old children. • Consider child's current language developmental level, interests and support needs. When viewing vignettes, consider which techniques apply to children with DD to scaffold his or her development
4	Emotion Coaching	• Discuss about Chinese cultural reluctance to express emotions. • Psychoeducation on the appropriate emotional developmental milestones for 3-6 year old children. • Consider child's current emotional developmental level, interests and support needs. When viewing vignettes, consider which techniques apply to children with DD to scaffold his or her development. Go through modified handouts and role play with scripts.

Lesson	Topics	Core Content
5	Social Coaching	• Psychoeducation on the appropriate social developmental milestones for 3-6 year old children. • Consider child's current social developmental level, interests and support needs. When viewing vignettes, consider which techniques apply to children with DD to scaffold his or her development
6	Praise and Encouragement	• Discuss Chinese parents' resistance to praise. • Introducing the growth mindset. Praising children's effort, motivation, hard work and persistence, rather than success.
7 & 8	Reward	• Develop individualized reward charts and teach parents ways to work with teachers to develop consistent home and school reward programs
9	Establishing Rules and Routine	• No modifications made.
10	Ignore	• Teach and practice stress management strategies when using the "ignore" strategy
11	Time-out	• Brainstorm more coping strategies
12	Problem Solving Skills & Preparation for Future	• Teach parents how to give and get support in order to enhance peer supportive networks.

The Incredible Years Parenting Program (IYPT; updated 2008 version) was used – with permission from the Incredible Years Basic Parenting program – for parents of children (3-6 years) by an experienced clinical psychologist. The philosophy and the core elements of the original program were preserved. Additional modifications were made to cater to Chinese parents of children with developmental disabilities.

Tailoring the Incredible Years Parent Training Program for Chinese Parents of Children with Developmental Disabilities

The original twenty 2-hour sessions in the Incredible Years Basic Parenting program for parents of children (3-6 years) were adapted into twelve 2-hour sessions to make it more feasible in light of the hectic family schedules and limited mental-health care resources in Hong Kong (see Table 2).

The treatment sessions were conducted in the parents' native language, namely Cantonese Chinese. Chinese subtitles were added to the vignettes to assist the parent's understanding. Chinese handouts and notes were provided.

To compensate for having fewer sessions, we spent less time on topics that are well-documented to be familiar to Chinese parents, such as household rules, routines, and effective limit setting and handling misbehaviors. We focussed more time on topics that are aimed at fostering children's development: academic, persistence, social, and emotional coaches, as well as topics that have been found to be unfamiliar to Chinese parents, such as paying attention to positive behaviors through praise and reward.

Table 2 shows the content and objectives of the core Incredible Years Parent Training Program (IYPT). The program was designed by referring to guidelines on tailoring the program to children's developmental needs (Webster-Stratton, 2007) and published IYPT adaptations for children with developmental disabilities (McIntyre, 2008a). One of the core methods for the IYPT is that therapists work collaboratively with parents to develop

individual goals for each parent and child. Clinician collaborated with parents to tailor the program content to each parent and child's particular situation. For parents of children with developmental disabilities, this tailoring process involved helping parents understand their child's diagnosis and how it may affect their child's social, emotional, and academic development, setting developmentally appropriate goals to scaffold their child's development.

To assist parent's to develop a realistic understanding of the children's age-appropriate developmental skills, we referred to the Australian Early Development Index (AEDI) and the longitudinal Study of Australian Children. Key information was translated for the parents to assist them to set developmentally- appropriate goals.

Below are some of the ways that the Clinician worked with parents in each major area of the program to address the special needs of families that have children with developmental disabilities.

Parents Learning How to Coach Their Children's Social Skills and Help Sustain Their Attention during Play Activities.

It is critical that parents of children with developmental disabilities become highly skilled as academic, social, and emotional coaches. The academic and persistence coaching during child-directed parent play interactions should help the parents scaffold their children's play so that the children can sustain their play activities for longer periods of time.

Next, the parents learn how to do *emotion and social coaching* during child-directed play. During social coaching, the parents would describe the behavior when the child takes turns, waits, shares, makes a suggestion, follows another's ideas, or gives a compliment. During emotion coaching, parents describe children's feelings. When the parents label uncomfortable feelings, they combine this with persistence coaching to help the children stay calm. For example, a parent might say to a child who is trying to do a puzzle and getting frustrated, "*That is frustrating and hard work to get the right puzzle piece, but you are trying*

hard and staying patient." Parents begin practicing this coaching during dyadic play with their children; they model appropriate social skills and feelings language and prompt their children's use of appropriate social skills. Later, they are encouraged to arrange scaffolded play dates with other children and to provide peer coaching during these visits to further their children's social and emotional learning experiences.

In our pilot group, we found that Chinese parents were lacking in the emotion vocabulary to effectively apply emotion coaching, so we added practical examples in the emotion and social coaching handouts. These Cantonese dialogues made it easier for parents to participate in role-play and generalisation of the technique.

Parents Learn to Increase the Saliency of their Praise and Tangible Rewards.

Children with developmental disabilities get less praise and encouragement from adults than children without the diagnosis. In our intervention, parents were taught to use immediate and enthusiastic short labeled praise combined with visual and tactile cues for children with developmental disabilities, who could be inattentive, distractible, and might not readily read nonverbal facial cues and understand complex sentences. Because it is especially unusual for Chinese parents to praise enthusiastically, parents of children with developmental disabilities would need extra training in these coaching skills and language as well as extra encouragement to keep praising. The barriers to praising may also be associated with the parents' negative views of their children with developmental disabilities, as well as be strengthened by the stigma involved in having a child with developmental disabilities with the Chinese community. We encouraged parents to handle their child's developmental disabilities using the growth mindset (Dweck, 2006) – the idea that abilities can be developed through dedication and hard work and that effort, hard work and persistence are praiseworthy. Parents were encouraged to focus on developing their skills and to refrain from expecting perfection and immediate treatment gains. This mindset assisted parents to support

their child's learning by breaking down tasks into smaller parts and praising each part of the process rather than waiting for the perfect completion of the task.

Behavior charts and incentive programs are covered in detail when working with parents of children with developmental disabilities. The Clinician helped parents to develop an individualized reward chart in the session, starting with very simple tasks and building up the difficulties of the task over the second half of the parent training course so that both parents and child are gradually moving closer to their treatment goals set at the beginning of the course.

Parents Learn About Clear Limit Setting and Predictable Schedules.

Because these children frequently have a language-delay and do not seem to respond to commands, adults are more likely to speak loudly, yell, and repeat a great many commands. Parents were taught to reduce their commands to those that are the most important, giving them in a positive, clear, and respectful manner, and then being prepared to follow through if the command is not obeyed. When this is achieved, children will learn that when their parents make a request they are expected to comply.

Another way to help children follow rules and to limit the number of commands given is to have visual schedules for the children. Parents were shown examples of predictable routines such as hanging up their coat, having a snack, reading together, having a play activity, and eating dinner, and predictable morning and bedtime routines such as getting dressed (or putting on pyjamas), eating, brushing teeth, and washing face and hands. The leader and facilitators worked out these schedules with parents and then helped them use picture cues for each activity on laminated boards (or magnets for the refrigerator) so children could move each activity to the "done" side of the board. These visual cues and schedules should help children know what was required of them during transition times. The schedule boards with pictures describing each step, which can be moved or checked by the child

himself, should help the child remember what to do, thereby increasing their independence and reducing parents' need to remind them. Parents could also add or move the picture cards to increase children's flexibility and to tailor for their growing needs.

Parents Learn About Immediacy of Consequences.

Children with developmental disabilities often have a short attention-span and need immediate consequences for their misbehavior. However, it is important that parents have developmentally appropriate expectations for their children's behavior. For example, many parents wrote that they would like their child to be able to complete all of their homework independently.

Parents were taught the value of redirecting distractible children to another homework task, assisting the children to break down the homework into smaller components, and following completion of each step with a reward in order to keep the children from losing their interest or from disrupting others.

Attention-seeking behaviors that do not cause harm to others, such as yelling and screaming behaviors, are ignored. However, aggressive and oppositional behavior requires time-out so that the behavior is not reinforced.

Stress Management and Problem Solving Skills

In addition to focusing on helping parents understand developmentally appropriate discipline strategies such as reminders, ignoring and giving time-out to calm down aggression, parents also learned how to teach their children problem solving strategies and to practice more appropriate solutions. Parents help their children learn and practice a variety of prosocial and self-regulating solutions (e.g., trade, ask first, wait patiently, get parent, take a deep breath, share, help another, apologize, use words, tell yourself to calm down, ignore, use positive imagery). Parents also help their children learn how to problem solve using *Wally's Detective Books for Solving Problems at School and at Home* (Webster-Stratton, 1998).

These books presented children with hypothetical problem situations to handle (e.g., wanting for a turn on the computer, being excluded from play, or being teased for children to solve). Parents and children talked about solutions and acted them out with puppets. One of the common situations, i.e. being teased at school, were translated into Cantonese and practiced as a role-play during the session.

Families of children with developmental disabilities often experience parental depression, marital conflict, high levels of stress, anger-management problems, and a sense of isolation or stigma because of their children's behavior problems and a lack of family, school, or community support (Webster-Stratton, 2012).To support parent's general health and wellbeing, door prizes consisted of a locally developed Stress Management CD to encourage parents to learn and practice deep breathing and muscle relaxation. Parents were also rewarded with a packet of coupons consisting of relaxing activities, such as restaurant coupons, upon completion of questionnaires at the post-assessment interview.

Statistical Analyses

ANCOVA between-subjects analyses were conducted to examine post-group changes in Parental Stress, Parenting, Child Behaviors and Parent-Child Interactions between the parents who attended the parenting group vs. parents who were on the waiting list. ANCOVA allowed statistical control for pre-existing differences between the treatment group and waiting-list comparison group.

Chapter 4: Results

The main hypotheses were:

(1) Parents in the experimental group will have significantly lower levels of parental stress post-intervention than the waitlist control group.

(2) Parents in the experimental group will engage in more behaviors expected to promote children's development (e.g., labeled praise, indirect commands, verbal responsiveness, and be able to initiate and respond to their child in the form of joint attention), and engage in fewer behaviors that are unhelpful to children's development (e.g., criticism and direct commands) after the intervention than the waitlist control group.

(3) Children of parents in the experimental group will display fewer behavioral problems, will be more compliant, display more positive affect and sensitive in initiating and responding to their parents in the form of joint attention after the parent training, as compared to the parents in the wait-list control group.

(4) Chinese-speaking parents will find certain topics somewhat harder to learn than other topics, specifically, in the areas of praise and reward, emotion coaching and in ignoring misbehaviors. On the other hand, they will find topics such as limit-setting easier to learn.

Preliminary Analyses

Demographics

To determine if the random assignment of parents to treatment versus control condition was effective, demographics information was compared between these two groups using independent samples *t*-tests. An alpha level of $p < .05$ was used.

Demographic characteristics and baseline measures of participants in the treatment and waitlist control are shown in Tables 3 to 5. Participants did not differ in the

demographics variables assessed (except for the parent's education level (p = .007)). There were no significant differences between conditions in the gender composition of the children, age of parents, kin relationship with the child, employment status, marital status and whether they received government benefits (all ps > .06).

Table 3
Demographics Characteristics of Treatment and Waitlist-Control Participants (n=47, with 25 participants in treatment group and 22 participants in control group)

		Treatment	Waitlist	*F*	*p*
Total Number	47	25	22		
Characteristics of Parents					
Gender	Male Female	6 (24%) 19 (76%)	1 (5%) 21 (95%)	3.614	.064
Age mean (*SD*)		38.38 (3.87)	37.39 (3.01)	.779	.383
Marital status	Married Divorced	23 (92%) 2 (8%)	19 (86%) 3 (14%)	.378	.542
Employment status	Employed Unemployed	15 (60%) 10 (40%)	14 (64%) 8 (36%)	.001	.980
Education level	Tertiary education Secondary education	18 (72%) 6 (24%)	12 (55%) 10 (45%)	7.969	.007
Source of fund	Received government subsidy Private fund	12 (48%) 13 (52%)	13 (59%) 9 (41%)	1.045	.312
Characteristics of Children					
Gender	Male Female	19 (76%) 6 (24%)	16 (72%) 6 (27%)	.063	.803
Age mean at time 1 (*SD*)		55.92 (10.88)	56.52 (11.00)	.036	.850
Age mean at		56.52	60.63	1.670	.203

intervention (*SD*)	(11.10)	(10.67)	

Note. *$p < .05$, **$p < .01$, ***$p < .001$.

Table 4
Diagnoses of Children

Diagnosis Categories	Number of Children (Percentage)	
	Treatment (n = 25)	Waitlist (n = 22)
Autism Spectrum Disorder	4(16%)	1(4%)
Developmental Delay (speech, social, cognitive and/or physical)	6(24%)	7(32%)
Asperger's syndrome	1(4%)	3(14%)
Attention-Deficit Hyperactivity Disorder	0(0%)	1(4%)
Pervasive Developmental Disorder	2(8%)	0(0%)
Autism Spectrum Disorder with comorbidity	2(8%)	3(14%)
Developmental Delay with comorbidity	8(32%)	3(14%)
Attention-Deficit Hyperactivity Disorder with comorbidity	2(8%)	1(4%)
Pervasive Developmental Disorder with comorbidity	0(0%)	3(14%)

Table 5
Parents' Acculturation

		M	*SD*	*F*
Separation	Control	17.71	2.45	.037
	Treatment	17.56	2.90	
Conflict	Control	20.43	3.47	.520
	Treatment	19.44	5.41	
Alteration	Control	16.14	1.96	.407
	Treatment	16.68	3.41	
Id-Western	Control	9.29	2.15	.016
	Treatment	9.36	1.80	
Id-Eastern	Control	8.52	2.41	.709
	Treatment	9.16	2.66	

Note. $*p < .05$, $**p < .01$, $***p < .001$.

Attrition and Attendance

Of the 19 mothers and 6 fathers assigned to the treatment group, 15 mothers (79%) and 3 fathers (50%) completed more than 80% of the treatment sessions and also completed the post-treatment assessments. Attendance of the 12 total sessions indicated that mothers attended a mean of 8.15 sessions and fathers attended a mean of 9.43 sessions. No participant dropped out from the program. Tables 6.1 and 6.2 present the homework compliance rates and client satisfaction with the training sessions.

Table 6.1
Homework Compliance - Percentages of Participants Rating 4 (Satisfactory) or 5 (Very satisfactory) in Homework Evaluations by Topics across Sessions

	Understanding	Frequency	Confidence	Useful
Session 1 Child- directed Play	80.00%	88.00%	92.00%	92.00%
Session 2 Child-directed Play	96.00%	80.00%	92.00%	96.00%
Session 3 Academic Coaching	88.00%	88.00%	88.00%	88.00%
Session 4 Emotion Coaching	96.00%	92.00%	96.00%	100.00%
Session 5 Social Coaching	84.00%	88.00%	96.00%	96.00%
Session 6 Praise	96.00%	88.00%	96.00%	96.00%
Session 7 Praise and Reward	96.00%	84.00%	92.00%	92.00%
Session 8 Reward	88.00%	96.00%	100.00%	100.00%
Session 9 Routine	96.00%	96.00%	92.00%	88.00%
Session 10 Ignore	92.00%	88.00%	100.00%	80.00%
Session 11 Time-out	96.00%	92.00%	96.00%	96.00%
Session 12 Problem-solving	96.00%	92.00%	96.00%	96.00%

Table 6.2
Parents' Satisfaction - Percentages of Participants Rating 3 (Satisfactory) or 4 (Very satisfactory) for Session Evaluations by Topic across Sessions

	Content	Vignettes	Facilitator	Discussion	Role-play
Session 1	88%	80%	100%	96%	100%
Session 2	96%	88%	100%	100%	100%
Session 3	92%	80%	96%	92%	96%
Session 4	92%	84%	100%	100%	96%
Session 5	100%	76%	100%	100%	100%
Session 6	96%	92%	100%	92%	100%
Session 7	96%	96%	100%	100%	100%
Session 8	96%	88%	96%	96%	92%
Session 9	100%	92%	96%	100%	100%
Session 10	100%	96%	96%	100%	100%
Session 11	96%	100%	100%	100%	96%
Session 12	96%	100%	100%	96%	100%

Table 7.1 shows that reported parenting stress levels, child behaviors, and parent-child relationships did not differ significantly between the two conditions at baseline assessment respectively (F (1, 45) = .289, p > .5; F (1, 43) = 3.424, p > .07; F (1, 43)=.059, p > .8). There were also no significant difference in Kin-Spouse reports between the two groups for child behavior and parent-child relationships (F (1, 38) = 2.207, p >.1; F (1, 38) = .241, p >.6).

Table 7.1
Means and Standard Deviation for Treatment and Waitlist Control Participants on Baseline Measures

	Treatment *M (SD)*	Waitlist *M (SD)*	*F*
PSI-SF	103.64(20.73)	106.72(18.29)	.289
CBCL-oppositional	4.24(2.55)	5.50(1.85)	3.424
CBCL-oppositional (spouse)	4.09(2.28)	5.35(3.12)	2.207
HOME	33.28(6.78)	32.75(7.87)	.059
HOME (spouse)	30.78(8.27)	32.06(7.92)	.241

Note. *p < .05, **p < .01, ***p < .001.

Table 7.2 shows that there were no significant differences between groups at baseline for observed child and parent behaviors (all *p*s > .07)

Table 7.2
Means and Standard Deviation for Treatment and Waitlist Control Participants on Baseline Observational Measures

Observed behaviors	Treatment *M (SD)*	Waitlist *M (SD)*	*F*
Parent Categories			
Negative talk (NTA)	.430 (.509)	.270 (.212)	1.805
Direct Command (DC)	.875 (.529)	1.111 (.648)	1.852
Indirect Command (IC)	.782 (.580)	.638 (.397)	.929
Labeled Praise (LP)	.024 (.447)	.062 (.186)	.984
Unlabeled Praise (UP)	.205 (.303)	.172 (.213)	.173
Joint attention_initiated (PJI)	1.724 (.280)	1.671 (.323)	.366
Joint attention_responded (PJR)	1.491 (.350)	1.607 (.341)	1.286
Verbal responsiveness 0 (VR 0)	.084 (.081)	.153 (.170)	3.297
Verbal responsiveness 1 (VR 1)	.331 (.296)	.315 (.221)	.041
Verbal responsiveness 2 (VR 2)	.516 (.393)	.540 (.430)	.037
Verbal responsiveness 3 (VR 3)	1.652 (1.520)	1.471 (1.001)	.217
Child Categories			
Affect (AFFECT)	1.304 (.366)	1.521 (.414)	3.356
Joint attention_initiated (CJI)	1.011 (.440)	1.146 (.589)	.758
Joint attention_responded (CJR)	1.437 (.375)	1.640 (.316)	3.638
Compliance (CO)	.826 (.541)	.902 (.537)	.220
Non-compliance (NC)	.266 (.297)	.288 (.272)	.066

Note. **p* < .05, ***p* < .01, ****p* < .001.

Treatment Effects: Change From Time 1 to Time 2 Assessment

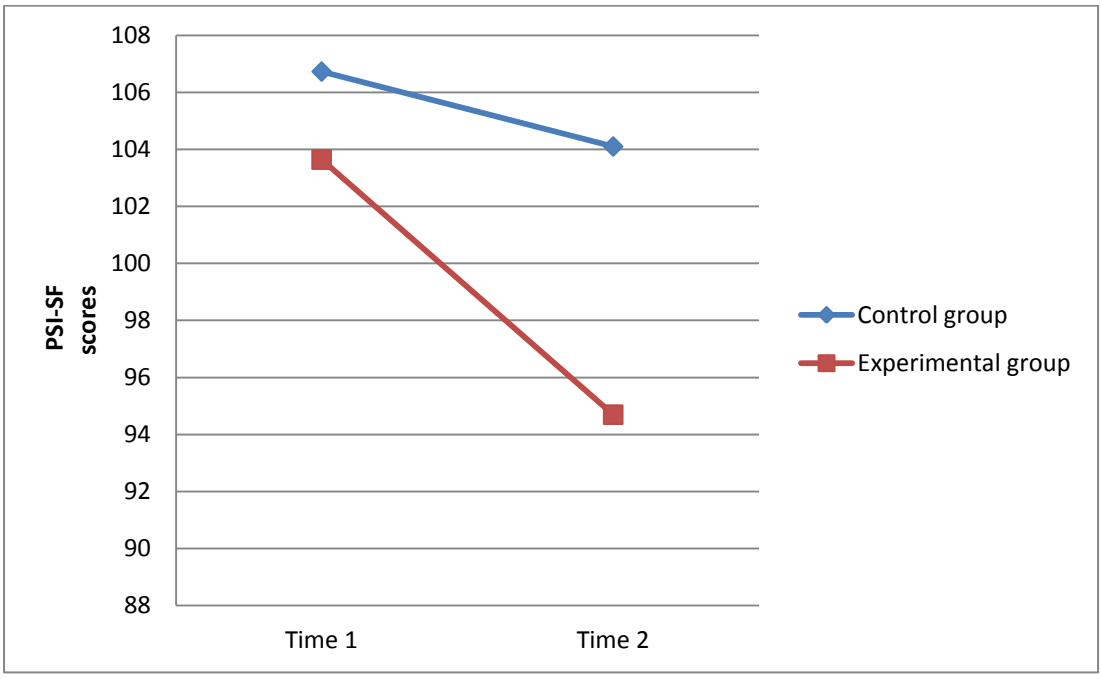
To evaluate the effectiveness of the parenting group-treatment, univariate analysis of covariance (ANCOVA) was the main data analytic method used. The independent variable was experimental group status, and the dependent variables were post- intervention (Time 2) scores, with corresponding pre-intervention scores (Time 1) and parent's educational level as covariates.

Intention-to-treat analysis was performed for a more robust evaluation. The intention-to-treat principle stipulates that all participants in the study should be included in the analysis in the groups to which they were originally randomized, regardless of whether they have completed the treatment.

Parenting Stress

ANCOVA analysis with parenting stress at Time 2 as the dependent measure (with the Time 1 measure and parent's educational level as covariates) revealed a significant group difference, suggesting that there was a significant reduction in parental stress for the treatment group after 12 sessions, as compared to parents on the waiting list ($F(1, 38) = 6.230$, $p = .017$, $\eta_p^2 = .141$; Figure 2.1).

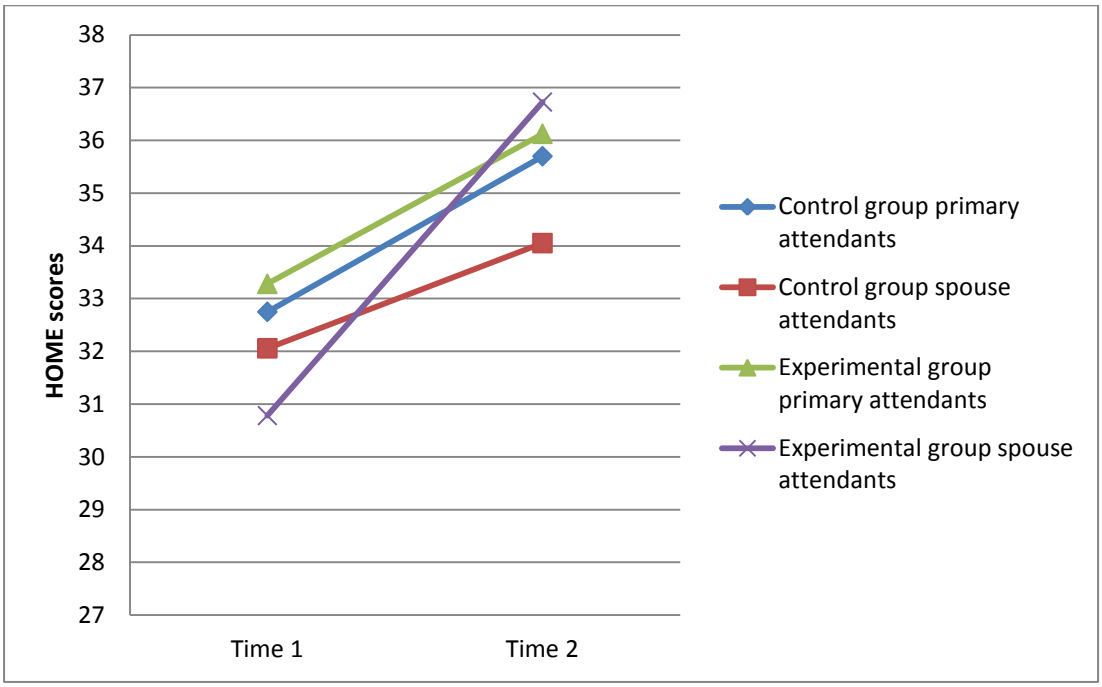
Figure 2.1. Change in Parenting Stress from Time 1 to Time 2 Assessment



Note. PSI-SF scores = participants' mean total scores on Parenting Stress Index–Short Form (Abidin, 1995); Time 1= Pre-intervention; Time 2 = Post-intervention.

An ANCOVA comparing group differences between treatment and waitlist control, using Time 2 self-report parenting as the dependent measure, and Time 1 self-report parenting and parent's educational level as covariates, revealed that there was no significant change in self-reported parenting for the two groups ($F(1, 37) = .015$, $p > .9$, $\eta_p^2 = <.001$). An analogous ANCOVA on spouse/kin-reports, however, revealed that their spouse or family member reported a significant improvement in the primary participants' parenting for the treatment group ($F(1, 30) = 5.540$, $p = .025$, $\eta_p^2 = .156$; Figure 2.2). These results suggest that while parents did not report a significant difference in their own parenting in the treatment group as compared with those on the waiting list, their spouses nevertheless reported a significant improvement in the participants' parenting.

Figure 2.2. Change in Parent–child Relationship and Family Relationship from Time 1 to Time 2 Assessment



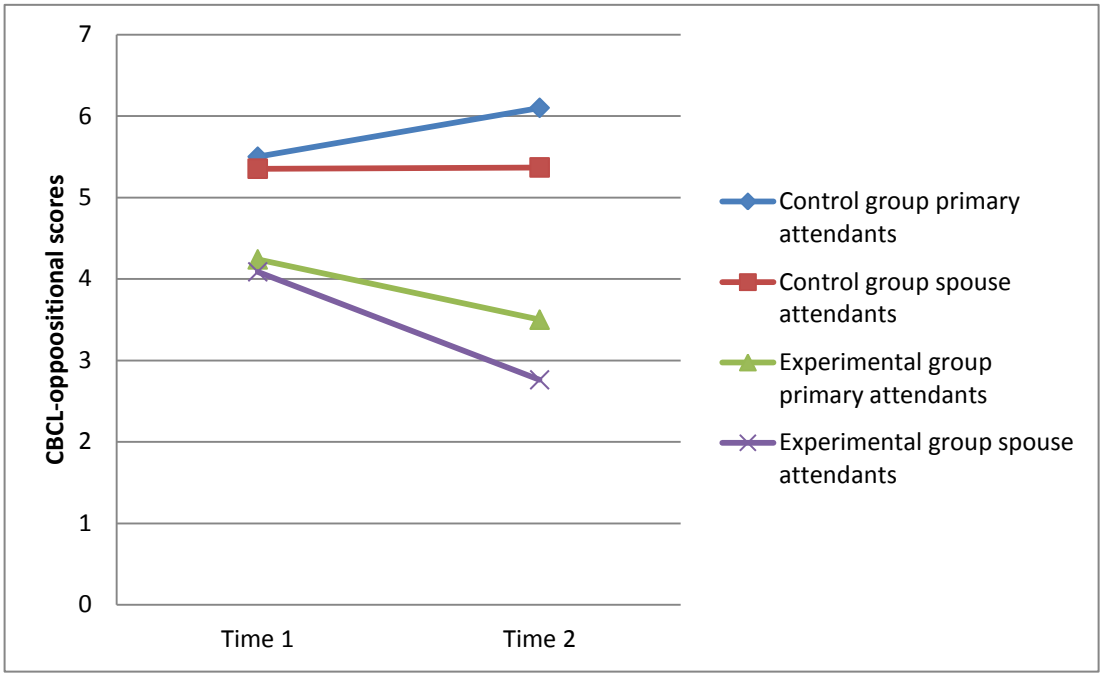
Note. HOME scores = participants' mean total scores on Home-life Interview (Leventhal et al., 2004); Time 1= Pre-intervention; Time 2 = Post-intervention.

Child Behaviors

ANCOVA analysis with child oppositional behaviors at Time 2 as the dependent measure (with the Time 1 measure as covariate) revealed a significant group difference, suggesting that there was a significant reduction in oppositional behaviors for children of parents in the treatment group as compared with those on the waiting list ($F(1, 37) = 6.193$, $p = .017$, $\eta_p^2 = .143$; Figure 2.3).

Furthermore, an analogous ANCOVA on spouse/kin-reports revealed that this reduction in oppositional behaviors in the treatment group was detected by the spouse or a family member ($F(1, 29) = 10.025$, $p = .004$, $\eta_p^2 = .257$; Figure 2.3).

Figure 2.3. Change in Child Behaviors from Time 1 to Time 2 Assessment



Note. CBCL-oppositional scores = participants' mean total scores on oppositional defiant disorder subscale of the Child Behavior Checklist (Achenbach & Rescorla, 2001; Leung et al., 2006); Time 1= Pre-intervention; Time 2 = Post-intervention.

Table 8.1 presents the means and standard deviations of self-report parenting stress scores (PSI-short form), child oppositional behavior scores based on the Child Behavior Checklist (parent reports: both the primary participants and their spouses), and HOME-life scores (both parents) in each experimental condition.

Table 8.1
Means (Standard Deviations) and Comparisons of Outcome Measures for Treatment and Waitlist- Control

		Treatment *M (SD)*	Waitlist *M (SD)*	*F*	η_p^2
PSI-SF	Pre Post	103.64(20.73) 94.70(14.04)	106.72(18.29) 104.10(13.70)	6.230*	.141
CBCL-oppositional	Pre Post	4.24(2.55) 3.5 (1.25)	5.50(1.85) 6.22(3.00)	6.193*	.143
CBCL-	Pre	4.09(2.28)	5.35(3.12)	10.025**	.257

oppositional (spouse/kin)	Post	2.63(1.77)	5.53(2.23)		
HOME	Pre	33.28(6.78)	32.75(7.87)	.015	<.001
	Post	36.13(3.38)	35.89(4.74)		
HOME (spouse/kin)	Pre	30.78(8.27)	32.06(7.92)	5.540*	.156
	Post	36. 40(3.93)	32.93(6.95)		

Note. *p < .05, **p < .01, ***p < .001.

Table 8.2 presents the inter-rater reliability for each of the coded variables observed during Dyadic Parent-Child Interaction, a structured play activity between the primary caregiver and the target child. All behavioral categories achieved satisfactory Intra-class correlations ranging from .715 to .955.

Table 8.2
Intra-class correlations for Coding Variables

Coding variables	Intra-class correlations
Parent Categories	
Negative talk (NTA)	.771
Direct Command (DC)	.900
Indirect Command (IC)	.799
Labeled Praise (LP)	.776
Unlabeled Praise (UP)	.922
Joint attention_initiated (PJI)	.732
Joint attention_responded (PJR)	.702
Verbal responsiveness 0 (VR 0)	.843
Verbal responsiveness 1 (VR 1)	.887
Verbal responsiveness 2 (VR 2)	.955
Verbal responsiveness 3 (VR 3)	.866
Child Categories	
Affect (AFFECT)	.715
Joint attention_initiated (CJI)	.719
Joint attention_responded (CJR)	.718
Compliance (CO)	.919
Non-compliance (NC)	.771

Table 8.3 presents the means and standard deviations of the coded variables observed during Dyadic Parent-Child Interaction, a structured play activity between the primary caregiver and the target child.

Table 8.3
Changes in Parent-child Engagement and Interaction between Treatment and Waitlist-Control Participants

			Treatment *M (SD)*	Waitlist *M (SD)*	*F*	η_p^2	*p*
Parent Categories	Phase						
Negative talk (NTA)	1	Pre	.257 (.421)	.214 (.225)	.162	.004	.690
		Post	.158 (.236)	.155 (.223)			
	2	Pre	.570 (.713)	.241 (.240)	4.349*	.100	.044
		Post	.154 (.246)	.298 (.397)			
	3	Pre	.462 (.604)	.368 (.543)	.930	.023	.341
		Post	.243 (.340)	.458 (.627)			
Direct Command (DC)	1	Pre	.485 (.370)	.580 (.419)	.112	.003	.740
		Post	.387 (.326)	.465 (.529)			
	2	Pre	.721 (.587)	.535 (.370)	4.102*	.095	.050
		Post	.390 (.393)	.681 (.713)			
	3	Pre	1.418 (.988)	2.218 (1.669)	.364	.009	.550
		Post	1.516 (.964)	1.995 (1.558)			
Indirect Command (IC)	1	Pre	.490 (.479)	.563 (.379)	.033	.001	.858
		Post	.411 (.278)	.394 (.323)			
	2	Pre	.818 (.756)	.560 (.434)	.067	.002	.796
		Post	.759 (.694)	.615 (.546)			
	3	Pre	1.038 (.945)	.882 (.912)	4.531	.104	.040*
		Post	1.407 (.816)	.790 (.914)			
Labeled Praise (LP)	1	Pre	.017 (.043)	.041 (.119)	2.999	.071	.091
		Post	.076	.028			

			(.119)	(.068)			
	2	Pre	.032	.050	5.252*	.119	.027
			(.089)	(.130)			
		Post	.095	.017			
			(.134)	(.028)			
	3	Pre	.023	.108	11.580**	.229	.002
			(.088)	(.392)			
		Post	.406	.066			
			(.458)	(.190)			
Unlabeled Praise (UP)	1	Pre	.104	.038	2.560	.062	.118
			(.176)	(.056)			
		Post	.184	.063			
			(.235)	(.109)			
	2	Pre	.157	.146	1.357	.034	.251
			(.246)	(.224)			
		Post	.276	.130			
			(.374)	(.198)			
	3	Pre	.353	.383	4.997*	.114	.031
			(.639)	(.528)			
		Post	.772	.392			
			(.690)	(.475)			
Joint attention_initiated (PJI)	1	Pre	1.693	1.737	.085	.002	.773
			(.368)	(.409)			
		Post	1.574	1.683			
			(.526)	(.366)			
	2	Pre	1.756	1.728	3.201	.073	.081
			(.408)	(.310)			
		Post	1.704	1.450			
			(.354)	(.565)			
Joint attention_responded (PJR)	1	Pre	1.511	1.649	.186	.005	.669
			(.455)	(.360)			
		Post	1.542	1.567			
			(.490)	(.460)			
	2	Pre	1.471	1.623	.188	.005	.667
			(.422)	(.471)			
		Post	1.472	1.483			
			(.497)	(.501)			
Verbal responsiveness 0 (VR0)	1	Pre	.085	.136	1.168	.029	.287
			(.117)	(.125)			
		Post	.088	.207			
			(.186)	(.197)			
	2	Pre	.074	.229	1.824	.045	.185
			(.095)	(.374)			
		Post	.059	.225			
			(.091)	(.435)			
	3	Pre	.092	.119	2.206	.054	.145
			(.133)	(.249)			
		Post	.010	.154			
			(.035)	(.312)			
Verbal responsiveness 1 (VR1)	1	Pre	.291	.399	5.341*	.120	.026
			(.320)	(.323)			
		Post	.206	.391			
			(.161)	(.235)			
	2	Pre	.335	.294	2.548	.061	.119
			(.370)	(.218)			

		Post	.202 (.191)	.314 (.280)			
	3	Pre	.367 (.455)	.241 (.348)	.019	<.001	.890
		Post	.300 (.504)	.313 (.426)			
Verbal responsiveness 2 (VR2)	1	Pre	.803 (.833)	.642 (.548)	1.756	.043	.193
		Post	.767 (.705)	.554 (.379)			
	2	Pre	.358 (.365)	.636 (.666)	.118	.003	.733
		Post	.484 (.486)	.502 (.443)			
	3	Pre	.388 (.506)	.412 (.500)	.597	.015	.445
		Post	.274 (.413)	.398 (.543)			
Verbal responsiveness 3 (VR3)	1	Pre	1.920 (1.748)	2.002 (1.450)	1. 691	.042	.201
		Post	1.942 (1.880)	1.602 (1.419)			
	2	Pre	1.890 (1.576)	2.129 (1.385)	4.122*	.096	.049
		Post	1.857 (1.978)	1.773 (1.410)			
	3	Pre	1.145 (1.379)	.515 (.708)	2.388	.058	.130
		Post	.916 (1.115)	1.168 (1.298)			
Child Categories							
Affect (AFFECT)	1	Pre	1.247 (.428)	1.544 (.487)	6.007*	.133	.019
		Post	1.522 (.448)	1.333 (.551)			
	2	Pre	1.42 (.484)	1.649 (.451)	.797	.020	.377
		Post	1.580 (.405)	1.533 (.523)			
	3	Pre	1.247 (.394)	1.368 (.554)	.140	.004	.710
		Post	1.464 (.411)	1.417 (.388)			
Joint attention_initiated (CJI)	1	Pre	1.091 (0.564)	1.181 (0.566)	.065	.002	.799
		Post	1.139 (0.609)	1.122 (0.388)			
	2	Pre	0.931 (0.444)	1.111 (0.673)	.025	.001	.876
		Post	1.056 (0.498)	1.217 (0.624)			
Joint attention_responded (CJR)	1	Pre	1.360 (0.508)	1.596 (0.394)	14.421**	.270	<.001
		Post	1.583	1.183			

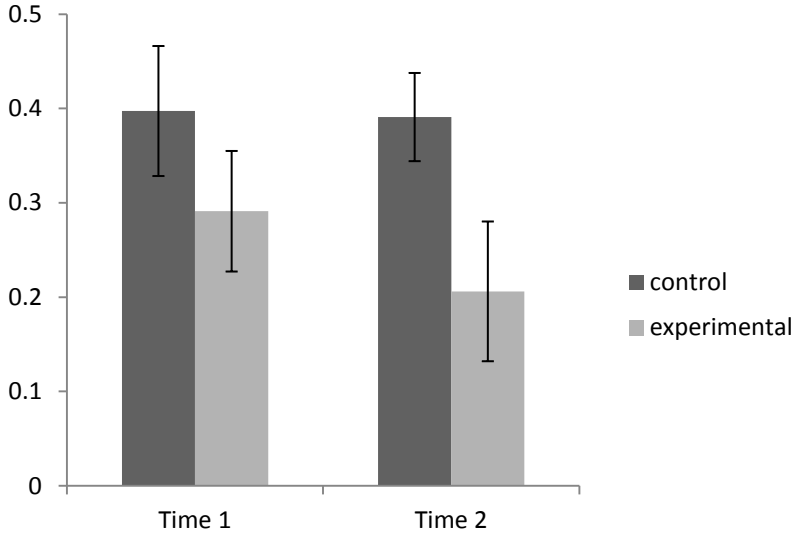
			(0.464)	(0.425)			
	2	Pre	1.513	1.684	1.069	.027	.307
			(0.441)	(0.423)			
		Post	1.625	1.550			
			(0.397)	(0.499)			
Compliance (CO)	1	Pre	0.647	0.681	.014	<.001	.906
			(0.313)	(0.309)			
		Post	0.589	0.601			
			(0.373)	(0.475)			
	2	Pre	0.891	0.664	4.629*	.109	.038
			(0.677)	(0.393)			
		Post	0.670	0.903			
			(0.485)	(0.664)			
	3	Pre	0.939	1.362	.071	.002	.791
			(1.042)	(1.250)			
		Post	1.056	1.454			
			(1.163)	(1.455)			
Non-compliance (NC)	1	Pre	.155	.075	.296	.008	.589
			(.252)	(.081)			
		Post	.108	.134			
			(.110)	(.117)			
	2	Pre	.188	.074	4.821*	.113	.034
			(.279)	(.085)			
		Post	.177	.210			
			(.172)	(.174)			
	3	Pre	.149	.291	.005	<.001	.942
			(.248)	(.583)			
		Post	.218	.184			
			(.344)	(.240)			

Changes in Observed Parent Behaviors during Child-directed Play from Time 1 to Time 2 Assessment

An ANCOVA comparing group differences between treatment and waitlist control, using Time 2 observed behaviors as the dependent measure and Time 1 observed behaviors and parent's educational level as covariates, indicated that Time 2 scores on verbal responsiveness 1 (i.e. irrelevant verbal responses) for the treatment group was significantly lower than the waitlist control group ($F(1, 39) = 5.341$, $p = .026$, $\eta_p^2 = .120$; Figure 3.1). Medium effect size was found for this difference. This means that parents in the treatment group displayed less irrelevant verbal responses when interacting with their child during

child-directed play. Analogous ANCOVA analyses showed that the two groups did not differ on their scores for other observed variables at Time 2 (all *p*s > .09).

Figure 3.1. Change in Verbal Responsiveness 1 (VR1: irrelevant verbal responses) from Time 1 to Time 2 Assessment for Child-directed Play (Phase 1)



Note. A code of VR1 was given when parents responded to child's communication acts but does not follow the relevant topic

An ANCOVA comparing group differences between treatment and waitlist control, using Time 2 observed behaviors as the dependent measure and Time 1 observed behaviors and parent's educational level as covariates, indicated that Time 2 scores on negative talk (F (1, 39) = 4.349, p =.044, η_p^2 = .100; Figure 3.2) and direct command (F (1, 39) = 4.102, p =.050, η_p^2 = .095; Figure 3.3) for the treatment group was significantly lower than the waitlist control group. The effect sizes for both negative talk and direct command were small to medium. Results also indicated that Time 2 scores on for the treatment group was significantly higher than the waitlist control group for labeled praise, (F(1, 39) = 5.252 p = .027, η_p^2 = .119; Figure 3.4) and verbal responsiveness 3 (F (1, 39) = 4.122, p =.049, η_p^2 =.096; Figure 3.5) with small to medium effect size. Analogous ANCOVA analyses showed

that the two groups did not differ on their scores for other observed variables at Time 2 (all *p*s > .08). The results mean that during parent-directed play, parents used less negative talk, direct command, used more labeled praise and provided more elaborate verbal responses when interacting with their child.

Figure 3.2. Change in Negative Talk from Time 1 to Time 2 Assessment during Parent-directed Play (Phase 2)

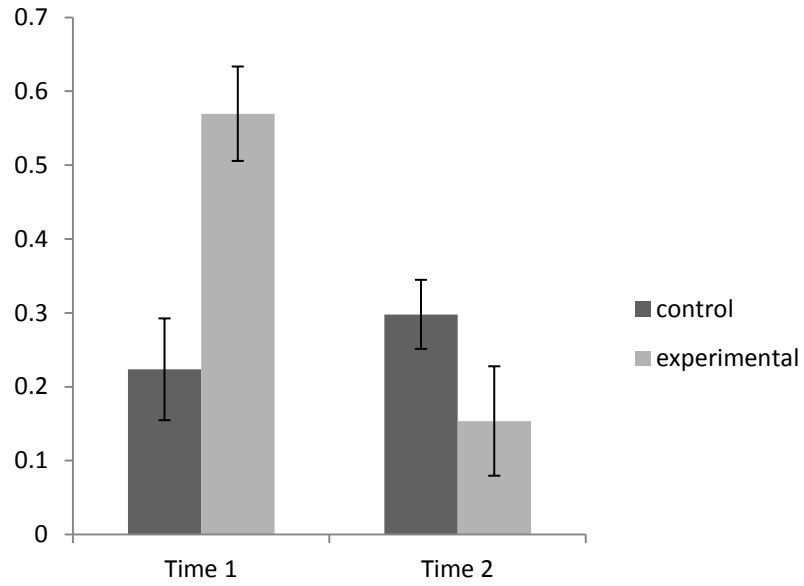


Figure 3.3. Change in Direct Command from Time 1 to Time 2 Assessment during Parent-directed Play (Phase 2)

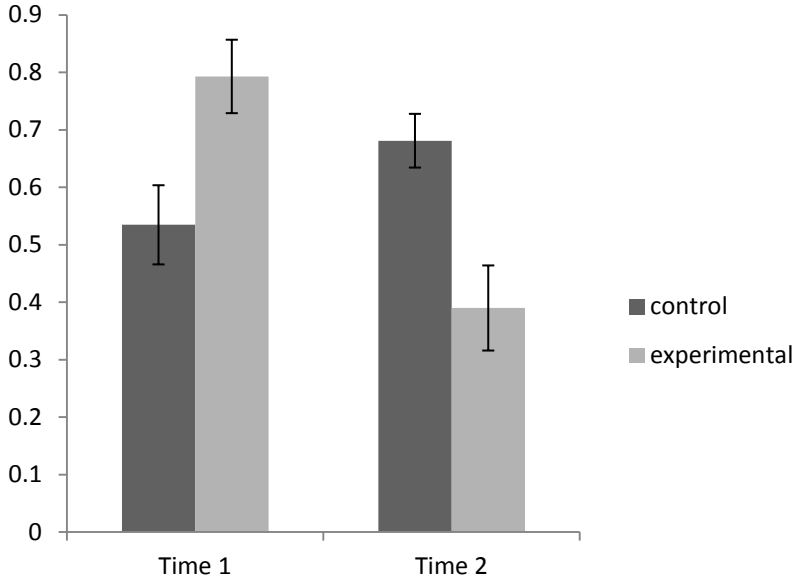


Figure 3.4. Change in Labeled Praise from Time 1 to Time 2 Assessment during Parent-directed Play (Phase 2)

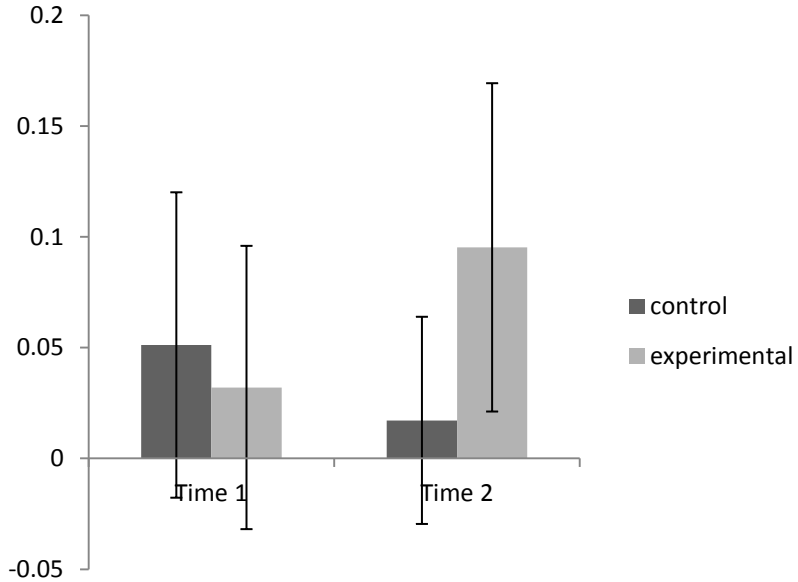
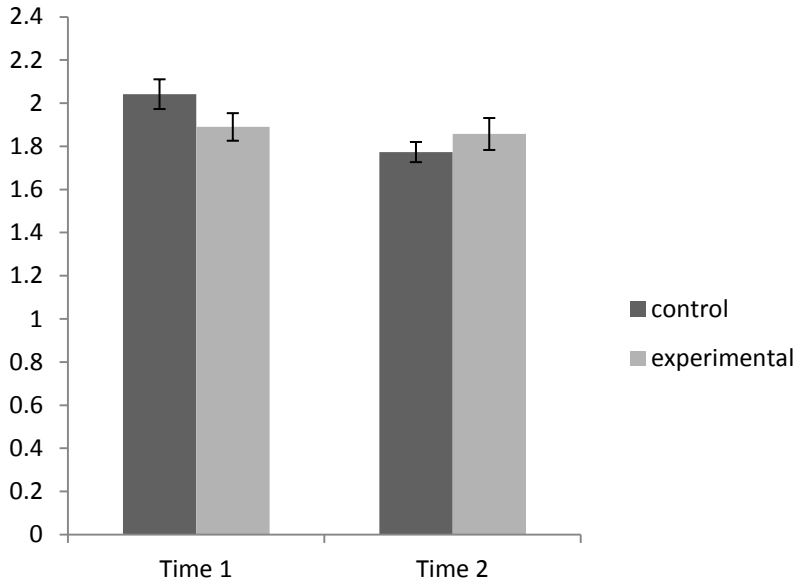


Figure 3.5. Change in Verbal Responsiveness 3 from Time 1 to Time 2 Assessment during Parent-directed Play (Phase 2)



Changes in Observed Parent Behaviors during the Phase of Clean- up from Time 1 to Time 2 Assessment

An ANCOVA comparing group differences between treatment and waitlist control, using Time 2 parent observed behaviors as the dependent measure and Time 1 parent observed behaviors and parent's educational level as covariates, indicated that Time 2 scores on for the treatment group was significantly higher than the waitlist control group for indirect command ($F(1, 39) = 4.531$, $p = .040$, $\eta_p^2 = .104$; Figure 3.6), labeled praise, ($F(1, 39) = 11.580$, $p = .002$, $\eta_p^2 = .229$; Figure 3.7) and unlabelled praise ($F(1, 39) = 4.997$, $p = .031$, $\eta_p^2 = .114$; Figure 3.8) and The effect size for labelled praise was medium to large, and the effect sizes for unlabelled praise and indirect command were small to medium. Analogous ANCOVA analyses showed that the two groups did not differ on their scores for other observed variables at Time 2 (all *p*s > .1). The results indicate that parents in the treatment condition were more frequent in using labeled praise and unlabeled praise.

Figure 3.6. Change in Indirect command (IC) from Time 1 to Time 2 Assessment for Clean-up (Phase 3)

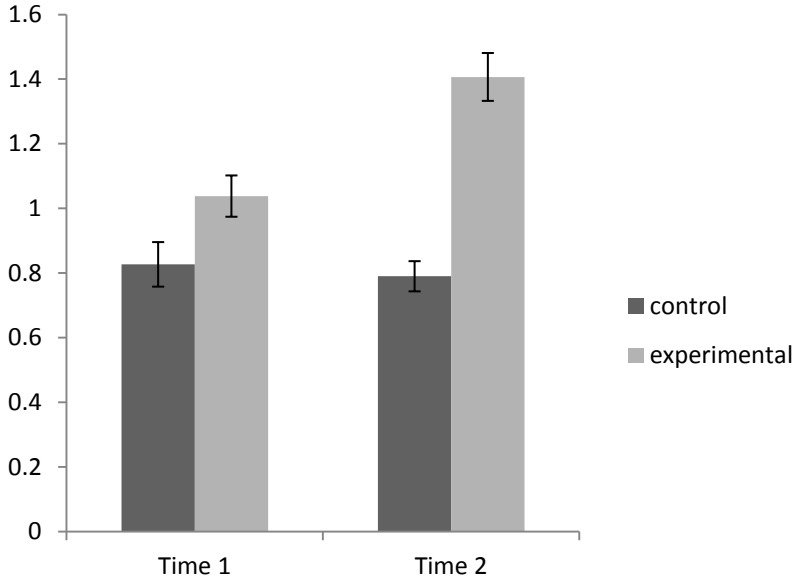


Figure 3.7. Change in Labeled Praise from Time 1 to Time 2 Assessment for Clean-up (Phase 3)

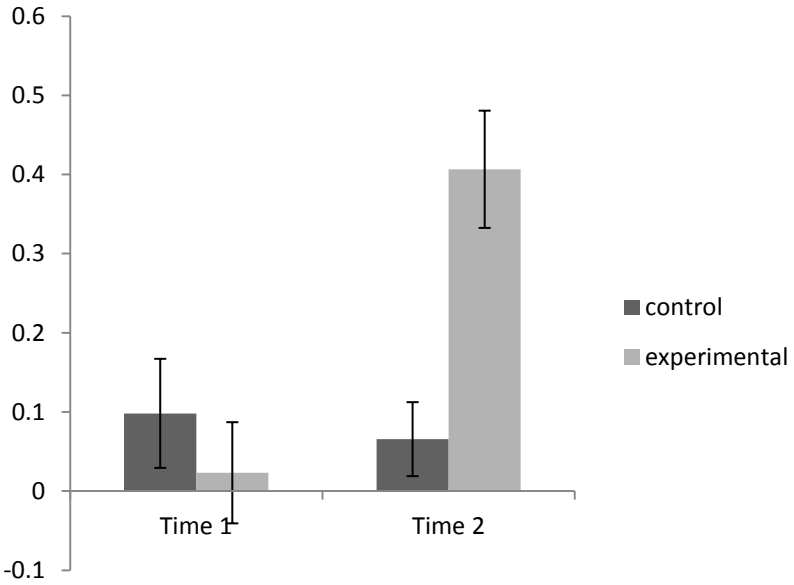
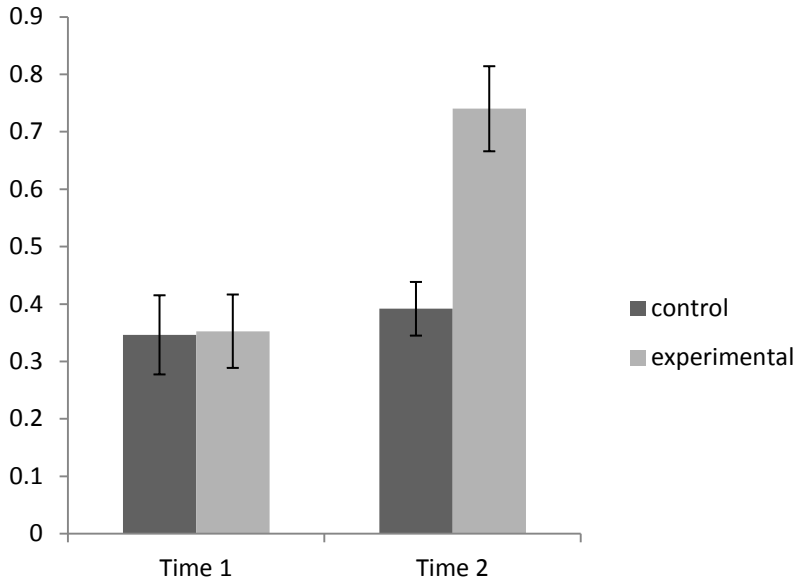


Figure 3.8. Change in Unlabeled Praise (UP) from Time 1 to Time 2 Assessment for Clean-up (Phase 3)



Changes in Observed Child Behaviors during Child-directed Play from Time 1 to Time 2 Assessment

An ANCOVA comparing group differences between treatment and waitlist control, using Time 2 observed child behaviors as the dependent measure and Time 1 observed child behaviors and parent's education level as covariates, indicated that at Time 2, children in the treatment group significantly displayed more positive affect then the waitlist control group and the effect size was medium ($F(1, 39) = 6.007$, $p = .019$, $\eta_p^2 = .133$; Figure 3.9). They were also significantly more likely to engage with their parents by responding using joint attention than the waitlist control group with large effect size ($F(1, 39) = 14.421$, $p < .001$, $\eta_p^2 = .270$; Figure 3.10). Analogous ANCOVA analyses showed that the two groups did not differ on their scores for other observed variables at Time 2 (all *p*s > .5).

Figure 3.9. Change in Affect from Time 1 to Time 2 assessment for Child-directed Play (Phase 1)

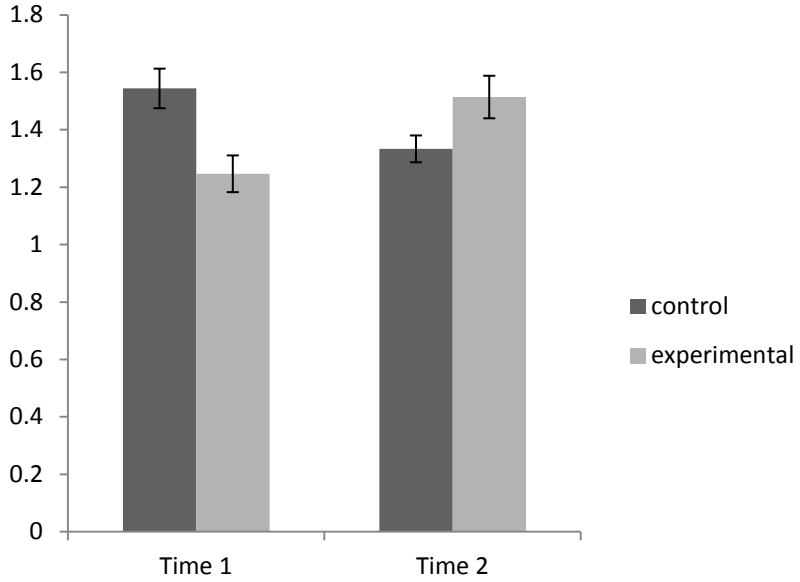
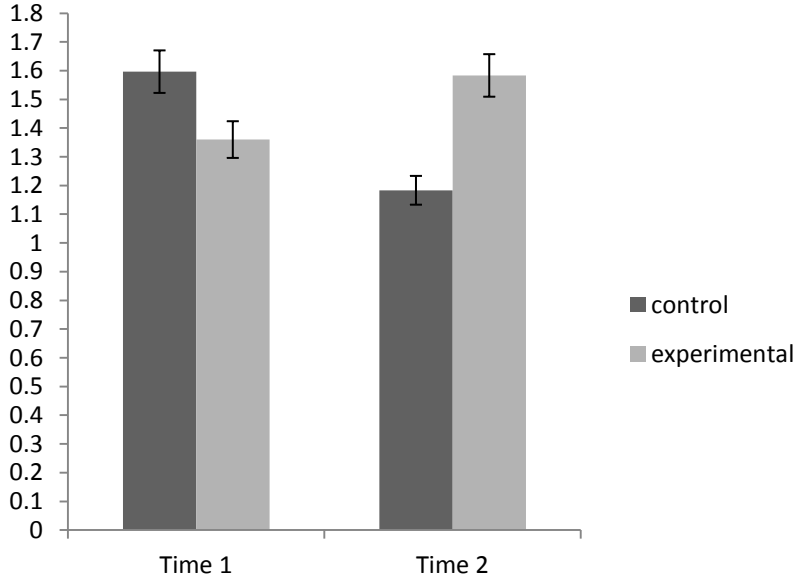


Figure 3.10. Change in Child Responded Joint Attention from Time 1 to Time 2 assessment for Child-directed Play (Phase 1)



Changes in Observed Child Behaviors during Parent-directed Play from Time 1 to Time 2 Assessment

An ANCOVA comparing group differences between treatment and waitlist control, using Time 2 observed child behaviors as the dependent measure and Time 1 observed child behaviors and parent's education level as covariates, indicated that Time 2 scores on Compliance ($F(1, 38) = 4.629$, $p = .038$, $\eta_p^2 = .109$; Figure 3.11) and non-compliance ($F(1, 38) = 4.821$, $p = .034$, $\eta_p^2 = .113$; Figure 3.11) for the treatment group was significantly lower than the waitlist control group with small to medium effect size. Analogous ANCOVA analyses indicated that the two groups did not differ on their scores for other observed variables at Time 2 (all *p*s > .3). It is worth noting that during Parent-directed play, parents in the treatment condition made less Direct Commands, reducing children's opportunity to be given higher scores for compliance.

Figure 3.11. Change in Compliance from Time 1 to Time 2 assessment for Parent-directed Play (Phase 2)

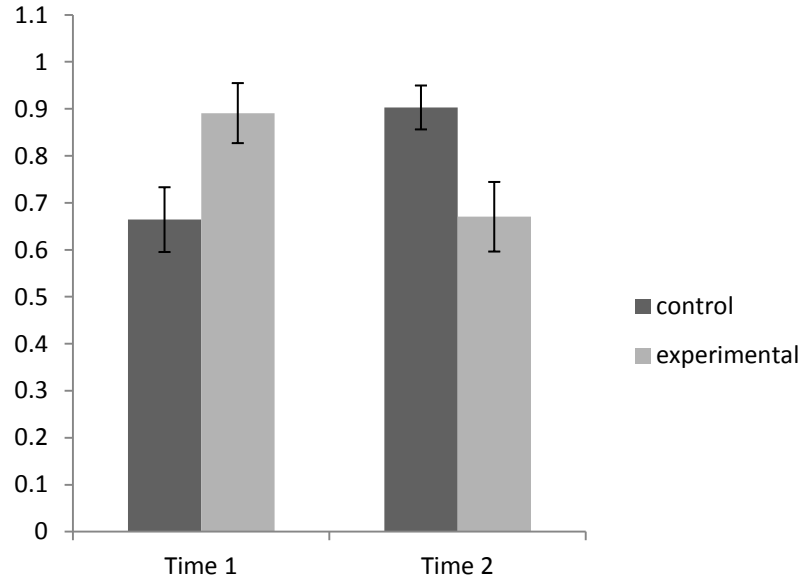
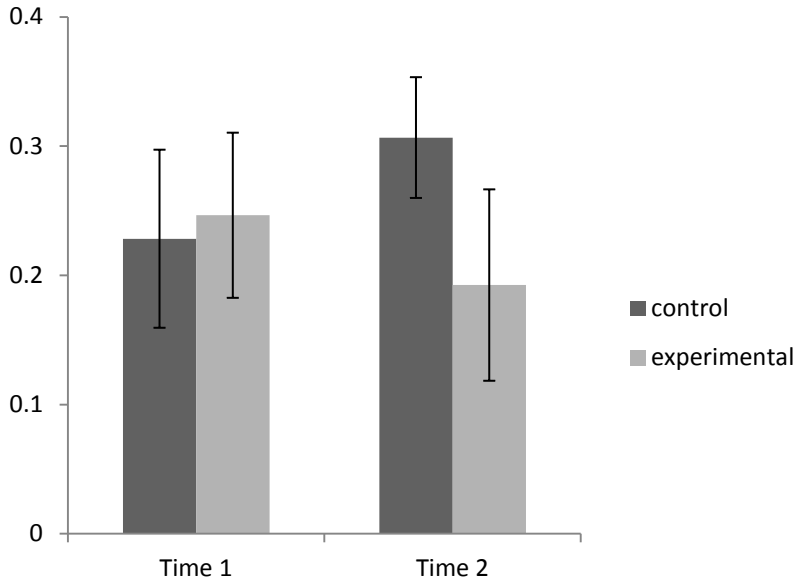


Figure 3.12. Change in Non-compliance from Time 1 to Time 2 assessment for Parent-directed Play (Phase 2)



Changes in Observed Child Behaviors during the Phase of Clean- up from Time 1 to Time 2 Assessment

An ANCOVA comparing group differences between treatment and waitlist control, using Time 2 parent observed behaviors as the dependent measure and Time 1 parent observed behaviors as covariate, indicated that the two groups did not differ their scores on other observed variables at Time 2 assessment (all *p*s > .2). The results indicate that no behavioral changes were observed during this phase.

In summary, blind observer's coding revealed that parents in the treatment condition did not exhibit the same behavioral changes across the 3 phases of structured play activity at the post-assessment, when compared to the waitlist control. Specifically, in phase 1 (child-directed play), parents in the treatment group exhibited less irrelevant verbalisation in response to their child's communication. In phase 2 (parent-directed play), parents in the treatment group showed a reduction in their negative talk and their direct command and an increase in labeled praise and relevant verbalisations in response to their child's

communication, compared to waitlist control parents. During Phase 3 (clean-up time), parents in the treatment group were offered more indirect command, labeled praise and unlabeled praise than parents in the waitlist control group during Time 2 assessment. The results show that parents in the treatment group demonstrated changes in the way they interact with their children, and that they applied different parenting techniques according to the various situations in the Dyadic Parent-Child Interaction play activity.

Changes in child behaviors were also observed in child-directed play. Specifically, children of parents in the treatment condition displayed more positive affect and were more likely to respond to their parents in the form of joint attention. During parent-directed play, there was a reduction of both compliant and non-compliant behaviors compared to children of parents in the waitlist condition. No changes were observed by blind observers for the final phase of the Dyadic Parent-Child Interaction play activity. One caveat: the sample size was modest and may not have sufficient power to detect some smaller intervention effects.

Table 9.1 presents the means and standard deviations of the frequency and helpfulness for the different topics across sessions, as rated by parents in the experimental group.

Table 9.1
Frequency and Helpfulness of Topics across Sessions

		M	Session Average *SD*	Session Average Range
Play	Frequency	3.85	.32	3.17-4.50
	Help	3.97	.33	3.33-4.67
Academic	Frequency	3.76	.20	3.50-4.25
	Help	3.75	.36	2.75-4.50
Emotion	Frequency	3.75	.35	3.00-4.25
	Help	3.68	.26	3.00-4.25
Social	Frequency	3.82	.26	3.20-4.40
	Help	3.93	.21	3.40-4.40

Praise	Frequency	4.01	.40	2.50-4.75
	Help	4.12	.40	2.50-4.75
Reward	Frequency	4.03	.23	3.50-4.67
	Help	4.06	.22	3.67-4.67
Routine	Frequency	4.11	.25	3.67-4.67
	Help	4.00	.24	3.33-4.33
Ignore	Frequency	3.93	.30	3.00-4.33
	Help	3.96	.24	3.33-4.67
Time-out	Frequency	4.00	.43	3.00-5.00
	Help	4.12	.46	3.00-5.00
Problem-solve	Frequency	4.00	.41	3.00-5.00
	Help	4.08	.40	3.00-5.00

Note. Likert scale ranged from 1(strongly disagree) to 5 (strongly agree).

Table 9.2 presents the means and standard deviations of the experimental parents' evaluations at post-intervention.

Table 9.2
Post-intervention Evaluation

	M	*SD*	Range
Meeting parenting goals	5.92	0.19	5.67-6.11
Reducing child misbehaviors	5.88	0.29	5.56-6.25
Teaching method	5.91	0.19	5.65-6.11
Appropriateness of program	6.14	0.25	5.78-6.33
Specific parenting strategies	5.90	0.22	5.62-6.16
Therapist	5.98	0.27	5.72-6.31

Note. Likert scale ranged from 1 (strongly unsatisfied) to 7 (strongly satisfied).

Profile of Parents Who Benefit More from the Intervention

Questions about which subgroups of families and children "benefited more" or were associated with better outcomes were examined. Partial correlations were calculated between parents' demographics and post-intervention scores, partialing out the pre-intervention scores and parent's education level to control for baseline individual differences. Tables 10.1-10.4

summarize the correlations between demographics, acculturation, and perceived usefulness of topics with the intervention effect.

Table 10.1
Summary of Correlations between Acculturation and Perceived Usefulness of the Parenting Topics

Measure	Play	Emosocial	Praise	Reward	Routine	Ignore	Command	Time-out	Reading	Academic
Separation	.077	-.088	.184	.086	-.088	-.146	-.254	-.111	-.162	-.205
Conflict	-.049	-.164	-.024	-.101	-.245	-.091	-.226	-.044	-.224	-.163
Alteration	.136	-.083	-.051	-.005	-.120	.132	-.005	.002	-.104	-.094
Western	-.047	-.047	-.011	.021	.193	-.157	-.060	-.161	-.179	-.227
Eastern	.214	.214	.098	.077	.261	.345	.232	.111	.079	.075

Note. $*p < .05$, $**p < .01$, $***p < .001$.

Table 10.1 shows that acculturation did not seem to correlate with perceived usefulness of parenting topics.

Table 10.2
Summary of Correlations between Demographics and Intervention Effect

	Questionnaires					**Coding variables Child categories**				
Measure	PSI-SF	CBCL-oppositional	HOME	CBCL-oppositional (spouse)	HOME (spouse)	Affect	Joint attention_ initiated (CJI)	Joint attention_ responded (CJR)	Compliance (CO)	Non-compliance (NC)
Gender	-.051	-.210	-.292	-.234	-.313	.011	-.073	-.485	.161	.502
Parent age	-.021	.299	-.048	-.008	-.173	-.216	.479	-.775**	-.143	.255
Marital status	-	-	-	-	-	-	-	-	-	
Employment	.078	-.036	.092	-.349	.215	-.191	-.421	-.024	-.012	.010
Educational level	.014	.135	.091	-.285	-.030	-.112	-.436	.091	.337	.314
Source of fund	-.019	.663**	.245	.082	-.063	-.213	-.014	-.097	.066	-.021
Child gender	-.160	.295	-.404	.219	-.433	.241	.211	-.175	-.108	.610
Attendance	.025	-.088	-.146	-.444	.032	.043	-.343	.253	.035	.204
Spouse attendance	-0.131	-.077	-.285	-.316	-.152	.163	.068	.107	-.658*	.374

	Coding variables Parent categories										
Measure	Negative talk (NTA)	Direct Command (DC)	Indirect Command (IC)	Labeled Praise (LP)	Unlabeled Praise (UP)	Joint attention_ initiated (PJI)	Joint attention_ responded (PJR)	Verbal responsiveness 0 (VR 0)	Verbal responsiveness 1 (VR 1)	Verbal responsiveness 2 (VR2)	Verbal responsiveness 3 (VR 3)
Gender	.179	.013	-.289	-.230	-.109	-.012	.201	.127	-.108	.001	.041
Parent age	.043	.330	-.114	-.128	-.116	-.154	-.054	.211	.036	.141	-.129
Marital status	.298	-.277	-.108	.051	.047	.139	.223	-.049	-.138	.021	.481*
Employment	-.351	.123	-.082	.508*	.165	-.042	.085	-.565**	-.385	.001	-.243
Educational level	-.040	-.183	.351	.020	-.073	.257	.281	-.237	.126	.131	.134
Source of fund	.209	-.166	.225	-.109	-.105	.154	-.056	-.410	-.094	.018	.064
Child gender	.361	-.340	.156	.074	-.029	.132	.090	.164	.086	-.079	.118

Attendance	-.079	-.228	.250	.146	.097	.218	.067	-.224	0	.118	.017
Spouse attendance	.102	-.183	.100	.161	.073	.258	.179	-.435*	-.022	.232	.175

Note. Gender: 0 = female, 1 = male; Marital status: 0 = divorced, 1 = married; Employment: 0 = unemployed, 1 = employed; Educational level: 0 = secondary, 1 = tertiary; Source of fund: 0 = private, 1 = government subsidy; Child gender: 0 = female, 1= male.
*$p < .05$, **$p < .01$, ***$p < .001$.

For parent reported-outcome measures, decrease in child behaviors was positively associated with families who received government subsidies (pr = .663, p = .003). But this correlation became statistically non-significant when the Bonferroni correction of multiple comparisons was applied.

For observed parenting behaviors, increased labeled praise was correlated with parents with an employed status (pr = .508, p = .013). A reduction of verbal unresponsiveness was correlated with parents with an unemployed status (pr = -.565, p = .005). An increase of elaborative verbal responses were correlated with parents who are currently married (pr = .481, p = .020).

For observed child behaviors, higher scores on responsive joint attention was correlated with parents who are younger in age (pr = -.775, p = .009). Higher scores in compliance was correlated with lower attendance (pr = -.658, p = .039).

But these correlations between demographics and intervention effect became statistically non-significant when the Bonferroni correction of multiple comparisons was applied.

Table 10.3

Summary of Correlations between Acculturation and Intervention Effect

	Questionnaires					**Coding variables Child categories**				
Measure	PSI – SF	CBCL-oppositional	HOME	CBCL-oppositional (spouse)	HOME (spouse)	Affect (AFFECT)	Joint attention_initiated (CJI)	Joint attention_responded (CJR)	Compliance (CO)	Non-compliance (NC)
Separation	.251	-.130	.386	.257	.215	.232	.169	.245	-.097	-.161
Conflict	.384	-.047	-.036	.357	.110	.103	.236	.060	-.075	-.182
Alteration	.117	.038	-.092	.130	.271	.060	.072	.068	.300	-.114
Western	-.205	-.008	.591**	-.316	.105	.232	.016	.238	-.012	.088
Eastern	-.291	.289	.004	.025	.018	-.013	.105	.167	-.147	.274

	Coding variables Parent categories										
Measure	Negative talk (NTA)	Direct Command (DC)	Indirect Command (IC)	Labeled Praise (LP)	Unlabeled Praise (UP)	Joint attention_initiated (PJI)	Joint attention_responded (PJR)	Verbal responsiveness 0 (VR 0)	Verbal responsiveness 1 (VR 1)	Verbal responsiveness 2 (VR2)	Verbal responsiveness 3 (VR 3)
Separation	.199	-.061	.063	-.235	-.244	-.036	.074	-.068	.135	.034	.041
Conflict	.083	-.210	-.006	.119	.056	-.010	-.073	-.058	-.004	.168	.161
Alteration	.290	-.094	-.053	.033	-.035	.100	-.068	.177	-.051	-.109	.125
Western	-.003	-.020	.321	-.095	.021	.234	-.220	-.223	-.097	.057	-.039
Eastern	.045	.175	.246	-.163	.023	.117	-.457	.035	-.151	-.096	-.107

Note. The HOME-life inventory measured changes in parent–child and family relationship.

*$p < .05$, **$p < .01$, ***$p < .001$.

For parent-reported behaviors, increased HOME-life scores were positively correlated with parents who were more acculturated with the western culture (pr = .591, p = .003). But these correlations between demographics and interaction effect became statistically non-significant when the Bonferroni correction of multiple comparisons was applied.

For observed parenting and child behaviors, no significant correlations were found between parents' acculturation and parent-child interaction.

Table 10.4
Summary of Correlations between Perceived Usefulness of Topics and Intervention Effect

	Questionnaires					**Coding variables Child categories**				
Measure	PSI - SF	CBCL-oppositional	HOME	CBCL-oppositional (spouse)	HOME (spouse)	Affect (AFFECT)	Joint attention_ initiated (CJI)	Joint attention_ responded (CJR)	Compliance (CO)	Non-compliance (NC)
Play	-.098	.106	.200	-.131	.167	-.166	-.188	.157	-.195	.146
Emo-social	-.384	-.062	.169	-.151	.177	.026	-.358	.079	-.316	.333
Praise	-.385	.011	.138	.113	.220	.072	-.121	.071	-.171	.094
Reward	-.312	-.003	.134	-.121	.334	-.069	-.292	.242	-.049	.126
Routine	-.294	-.011	.277	-.269	.476*	.079	-.234	.386	-.162	.282
Ignore	-.143	-.083	.381	-.300	.158	-.113	.044	.007	-.436*	.261
Command	.059	-.004	.339	-.167	.146	-.054	.105	.153	-.418*	.340
Time-out	.022	-.090	.463*	-.263	.220	-.083	-.036	.072	-.265	.227
Reading	.053	.092	.010	-.132	-.081	-.263	-.167	-.058	-.216	.277
Academic	.068	-.105	.087	-.137	-.096	-.058	-.294	-.135	-.160	.301

	Coding variables Parent categories										
Measure	Negative talk (NTA)	Direct Command (DC)	Indirect Command (IC)	Labeled Praise (LP)	Unlabeled Praise (UP)	Joint attention_ initiated (PJI)	Joint attention_ responded (PJR)	Verbal responsiveness 0 (VR 0)	Verbal responsiveness 1 (VR 1)	Verbal responsiveness 2 (VR2)	Verbal responsiveness 3 (VR 3)
Play	-.232	-.066	-.031	.176	-.061	.175	-.258	.090	-.080	-.390	-.002
Emo-social	-.002	.364*	.056	-.327	-.383	.099	-.389	.317	-.008	-.073	-.158
Praise	-.110	.351	-.031	.073	-.170	.092	.050	.032	-.018	-.054	.057
Reward	.120	-.031	-.393	-.122	.140	-.156	.011	.327	.013	.095	-.057
Routine	-.150	.241	.032	.044	-.194	.204	.200	-.010	.140	.012	.086
Ignore	-.287	.065	-.082	-.195	.006	.104	-.031	.157	.080	-.076	.178
Command	-.010	.129	-.077	-.264	.388	.220	-.024	.339	.205	-.024	.038
Time-out	-.047	.234	-.016	.085	.393	.099	.236	.093	-.015	.106	.080
Reading	-.050	.119	-.237	-.311	.879	.071	-.069	.236	.345	.105	-.071
Academic	-.223	.224	.115	.296	-.044	.157	.278	-.025	.101	.042	-.041

Note. **p* < .05, ***p* < .01, ****p* < .001.

For parent reported-outcome measures, increased HOME-life scores were positively correlated with parents who had higher perceived usefulness scores for the topic of time-out technique at post-intervention (*pr* =.463, *p* = .026). Increased spouse/kin-reported HOME-life scores were positively correlated with parents who had higher perceived usefulness for the topic of routine technique at post-intervention (*pr* =.476, *p* = .039).

For observed parenting behaviors, decreased direct command was correlated with parents who had lower perceived usefulness scores for the topic of social and emotion coaching (*pr* =.364, *p* = .048).

For observed child behaviors, higher scores in compliance were correlated with parents who had lower perceived usefulness scores for the topic of ignore (*pr* =.436, *p* = .037) and command (*pr* =.418, *p* = .047).

Bonferroni corrections for multiple comparisons render the abovementioned correlations statistically non-significant. The overall picture was that the treatment effect did not seem to correlate with demographic and other characteristics of the parents, suggesting that the treatment effect was robust across different profiles of parents. One caveat: the sample size was modest and may not have sufficient power to detect some valid correlations between parent characteristics and treatment gains.

Chapter 5: Discussion

This chapter discusses the present findings and evaluates the results with reference to prior research. Qualitative findings containing parents' feedback and process issues documented by the Clinician were presented to help understand and interpret the results.

Effectiveness of Program for Children with Developmental Disabilities and Their Parents

The aim of this study is to evaluate the feasibility and effectiveness of a parent training (PT) program called The Incredible Years Basic Pre-school Parent Program (Webster-Stratton & Reid, 2010), for parents with 3-6 year-old children with developmental disabilities in Hong Kong – specifically, in reducing parental stress and child behavior problems, as well as improving parenting practices and parent-child interaction.

Parenting Stress and Child Behavioral Problems

The main finding was that the Incredible Years Basic Parent Program was effective in decreasing parental stress and child behavioral problems for Chinese parents of children with developmental disabilities. Compared to the control group parents, intervention group parents reported significantly lower parental stress immediately after completing the program. These results are consistent with previous research where this intervention was used with ethnically diverse families (e.g. Azevedo et al., 2013; Kim et al., 2008; Lau et al, 2011).

Chinese Parents' Perception and Acceptability of the Basic Incredible Years Parent Training Program (IYPT)

The high attendance rate, homework compliance, satisfactory session evaluation ratings and lack of participant drop-out reveal that this program is considered highly relevant and acceptable by parents in our current sample.

One unique contribution of this study is the suggestive findings on the role of parental acculturation in the parent' perceived helpfulness of the techniques. In our current study, parents' ratings of the usefulness of the topics do not depend on their acculturation level, meaning that both Western and Eastern acculturated parents perceived the techniques as equally helpful.

This finding is different from what was found in a Korean American sample (Kim et al., 2008), which indicated that the intervention group parents benefited from learning positive discipline; however, low-acculturated mothers were more receptive to decreasing harsh discipline, while high-acculturated mothers were more open to adopting discipline strategies considered appropriate in the United States. However, it should also be noted that Kim et al. (2008) studied typically developing children between 3 and 8 years of age.

Further, in Kim et al. (2008), most of the mothers of children with developmental disabilities thought that positive discipline techniques were easy to use (e.g., 85% for praise and 95% for rewards) and useful (e.g., 100% for praise and 80% for reward). By contrast, only 44% of mothers perceived appropriate discipline were easy to use (e.g., timeouts and consequences), although over 70% of mothers perceived them as useful. Perhaps the intervention group mothers needed more time and practice of these unfamiliar strategies to incorporate them into their parenting practices. In our current sample, parents also rated being confident in using positive discipline techniques (e.g., 92-96% for praise and 100% for rewards) and considered those techniques helpful (e.g., 92-96% for praise and 100% for reward). However, unlike parents' in Kim et al., (2008), Chinese parents in the current study also perceived appropriate discipline as being equally easy to implement (ignore = 100% and time-out = 96%), notwithstanding their feeling that "ignore" might not be as helpful as the other techniques taught (ignore = 80% and time-out = 96%). These Chinese parents of children with developmental disabilities may have different priorities in their parenting aims,

as compared to Kim et al.'s (2008) Korean American sample. For instance, Chinese parents with children at risk for developmental disabilities may favor praise and reward strategies to coach and shape developmental improvements rather than corrections of misbehaviors.

Our findings converge with Ho, Yeh, McCabe and Lau's (2012) findings that perhaps concerns about Chinese parents' culturally based resistance to the use of praise and other social rewards have been overstated in the clinical literature. In Ho et al.'s study, a community sample of parents with 4-17 year-old children were presented with a written hypothetical vignette depicting a female 8-year-old child with externalizing behavior problems. The problems included refusing to comply with parent requests, throwing temper tantrums, being argumentative, and directing aggression toward a younger sibling. Parents were told that the child's mother sought the counsel of a behavior therapist who presented six behavior management strategies involving positive reinforcement (praise, rewards, effective commands), or negative punishment (response cost, time-out, ignore). For each strategy, parents were asked to rate acceptability of strategies (three statements), barriers to utilizing strategies (two statements), and perceived social support for the use of strategies (three statements). Ho et al. (2012) found that Chinese immigrant parents viewed positive reinforcement-based strategies designed to increase desired behaviors (i.e., praise, rewards, effective commands) as the most acceptable interventions for managing behavior problems. Similar findings were reported by Mah and Johnston (2012) and Morawska et al. (2011). On the other hand, Ho et al. (2012) found that Chinese immigrant parents viewed time-out and ignoring misbehavior as the least acceptable options presented. Perhaps in the Chinese context, ignoring misbehavior may be tantamount to shirking parental duty to correct a child immediately and publicly. Similar findings have been found in Lieh-Mak, Chung, & Liu (1983) and McMahon, Tiedemann, Forehand and Griest (1984).

Effectiveness of Incredible Years Basic Parent Training Program (IYPT) for children at risk for Developmental Disabilities

A meta-analysis of group-based interventions for parents of children with developmental disabilities found small effects for behavioral parent training programs in reducing parental distress and depressed symptomatology, with moderate to large effects for multicomponent interventions, or interventions using cognitive behavioral therapy with parents (Singer et al. 2007). These effect sizes are consistent with that found in the current study (η_p^2 = .163 for parenting stress, η_p^2 = .223 for child behavior, η_p^2 = .001 for parenting).

On the other hand, Lau et al. (2011) found no significant group effect at post treatment for parenting stress for parents of typically-developing school-aged children when controlling for baseline levels. In Lau et al.'s (2011) study, effect sizes based on post-treatment means after adjusting for pre-treatment differences between groups suggested effects in the medium to large range for parenting (δ=.49 for positive involvement, δ=–.71 for negative discipline), with negligible effect on parenting stress (δ=.07). The results of the current study compare favorably with Lau et al.'s (2011) study and provide preliminary evidence that the current program with minor cultural and developmental modifications seems effective for decreasing the parenting stress of parents with preschoolers at risk for developmental disabilities.

The HOPE-30 (Leung, Tsang, & Dean, 2012) was a 30-session parenting program locally developed for new immigrant parents of typically-developing 3 and 5 year-old children attending mainstream preschools in Hong Kong. Leung et al. (2012) reported a significant reduction in parental stress from pre-intervention to post-intervention measured by the parental stress index ($F(1,110) = 23.08$, $p < .001$, $\eta_p^2 = .173$) for their pre-school experimental group, but not for their intervention group conducted at the social services centres ($F(2,115) = 1.26$, $p = .288$). For parent-reported child-behavioral problems, there was

a significant decrease from pre-intervention to post-intervention measures ($F(1,112) = 35.63$, $p < .001$, $\eta_p^2 = .241$), which is consistent with the medium-to-large effect size found in the current study. These results further indicate that when cultural factors are considered, and when the context of delivery is familiar and supportive to parents, the Basic IYPT yielded comparable intervention effect sizes for parenting stress and child behavioral problems to a locally-developed intensive prevention program designed for typically-developing preschoolers.

Kin/Spouse-reported Child Behavioral Problems, Parent-child and Family Relationships

Intervention group parents and their kins/spouses perceived their children to display less behavior problems after the intervention ($\eta_p^2 = .343$), no analogous improvement was observed in the waitlist control group. These findings are consistent with previous findings (Gross, Fogg, Webster-Stratton, & Grady, 1999; Webster-Stratton, 2001). They also support the theoretical framework that parental use of effective discipline can prevent coercive family processes, resulting in fewer child problem behaviors (Patterson, Reid, & Dishion, 1998). When parents use positive and appropriate discipline, children are less likely to misbehave. As seen here and in Lau et al.'s study (2011), strengthened parenting skills decreased child behaviors in the intervention group. In Lau et al.'s study (2011), the effect sizes were in the medium to large range for child behavior problems, and similar effect size was found in our current sample ($\eta_p^2 = .223$).

An interesting pattern of results was found for self-reported parent-child relationship and family relationship. While parents who were the primary research participants did not report a significant change in their own parent-child bonding, their spouses reported improvements of small effect size ($\eta_p^2 = .173$) in the primary-participant parents' parenting. This finding indicates that intervention effect is being generalized to the home environment and detectable by a third party even though the parent in question might not yet have the self-

awareness of such changes.

Changes in Parent-Child Engagement and Interaction between Treatment and Waitlist Control Participants

Direct observations of parent and child behavior are probably much more sensitive to change and perhaps also represent a more ecologically valid assessment for children and parents (Eyberg & Robinson, 1981). The results from a meta-analysis examining behavioral outcomes for studies conducted between 1980 to 2010 on typically-developing children showed that while the mean effect size, measured by Cohen's *d*, for reduction in disruptive behaviors based on observations was .37, which was larger than mean effect sizes of .30 based on parents' self-reports (Menting, Orobio de Castro, & Matthys, 2013).

Pre-treatment intensity of children's problem behavior proved to be the strongest predictor of the IYPT's intervention effects on parental report, with larger effects for studies which included more severe cases (Menting, Orobio de Castro, & Matthys, 2013). Significant reductions in inappropriate child behaviors and increase in parenting practices associated with better child development were observed during structured play sessions from pre- to post-intervention, and there was a significant increase in perceived positive impact of the child.

It was hypothesised that parents in the experimental group would engage in more behaviors expected to promote children's development (e.g., praise, indirect commands, verbal responsiveness, and be able to initiate and respond to their child in the form of joint attention), and engage in fewer behaviors that are unhelpful to children's development (e.g., negative talk and direct commands) after the intervention than the waitlist control group. Children of parents in the experimental group were hypothesised to display fewer behavioral problems and be more compliant and sensitive in initiating and responding to their parents in

the form of joint attention after the parent training, as compared to those in the wait-list control group.

The major finding from the observed parent-child interactions was that the Incredible Years Basic Parent Program was effective in improving the quality of the parents' interactions with their children by decreasing parent's use of negative talk with an effect size of small to medium and direct commands with a medium effect size. Parents also increased their use of labeled praise. The effects found in our current sample were of a medium to large effect size. They were also more indirect or polite in their use of commands and this effect was small to medium in size. Furthermore, parents were able to provide more elaborative responses, a type of verbal response that predicts positive language development for young children. The effect size found in our current sample was small to medium.

Two other studies have reported observed changes prior to and following parents' participation for the Incredible Years Parent Training using a special needs sample. However, it is difficult to make comparisons because these studies have used composites for analyzing parenting and child behavioral changes. For instance, findings from Azevedo et al. (2013), indicated improvements of a medium effect size in positive parenting (a composite of labeled and unlabeled praise, positive affect, physically positive behavior and problem-solving); following a 14-week intervention for parents of preschoolers with ADHD (F (1, 66) = 18.21, p=0.001, η_p^2= 0.21). Whereas, an effect size of medium to large was found for labeled praise in the current study. Further, a small to medium intervention effect was found for negative talk in the current sample, this compares favorably with Azevedo et al.'s (2013) study which found no significant differences for critical parenting.

Another study by McIntyre (2008a) found that at post-intervention, there were significant reductions of a large effect size for inappropriate commands [t (24) = 6.88, p = 0.000, d = 1.53] and an insignificant result for praise [t (24) = -1.36, p = 0.093]. In the current

study, an intervention effect for direct command was medium and praise was medium to large.

A counter-intuitive finding was observed regarding the decrease of both compliant and non-compliant behaviors for children of parents in the intervention group at post-assessment. In McIntyre (2008a), children's inappropriate behavior was observed during parent–child interactions. Inappropriate behavior was a composite comprising of seven behaviors: inappropriate play behavior, intrusion on child's independence, attention/rewards for child's inappropriate behaviors, inappropriate commands, lack of follow through, Criticism and Aggression). On average, children engaged in maladaptive behavior during 10.12% of intervals (SD = 13.36) pre-intervention. Post-intervention, children's observed maladaptive behavior significantly reduced to 6.18% of intervals (SD = 9.73) [t (24) = 1.70, p = 0.052, d = 0.34]. We speculate that one possible reason for this somewhat confusing finding could be that child compliance was coded when the child performed, began to perform, or attempted to perform a behavior requested by the parent within the 5-second interval following the command. The reduction of parental requests or commands would also reduce children's chances of obtaining a score for compliance and non-compliance, thereby indirectly decreasing the scores for children's compliant and non-compliant behaviors.

An important research question was whether the parents were able to promote their child's development by being more responsive to their child's verbal communications and be able to initiate and respond to their child in the form of joint attention. Our findings indicate that parents were not only able to limit their tendencies to ignore or respond inappropriately to their child's verbal communication, they also displayed the targeted skills to scaffold their child's development using elaborative verbal responses. This finding is consistent with the findings by Azevedo et al. (2013) who found an improvement of a small effect for parents' coaching (composite of descriptive/encouragement statements and questions, reflective

statements and questions, and problem-solving); coaching (F (1, 66) = 4.09, p = 0.047, η_p^2= 0.06). An improvement of small to medium effect size for verbal elaboration was found in the current study, suggesting that parents were able to acquire the skills to be able to become a "coach" for their child's development and they are capable of providing a more language-rich environment to foster their child's language.

Even though children did not receive any direct intervention in the current research, the findings showed that children of parents in the intervention group showed a significant change in responding to their parents using joint attention and they were also affectionate towards their parents. This is preliminary evidence showing that The Incredible Years Basic Parent Training has an immediate impact on children's social development. The emergence of joint attention means that children in the experimental condition had shown significant maturation in their social development and they were more responsive and demonstrated more social awareness and motivation towards their parents, as compared to children in the control group. This behavioral change may imply that new neural circuits may have been formed in the child's brain, possibly laying a stronger foundation in their brain architecture (National Scientific Council on the Developing Child, 2007a). Children were also happier in their interactions towards their parents.

An interesting observation is that parents applied different techniques across three phases of the observed activity. In phase 1 (Child-directed play), parents in the treatment group exhibited less irrelevant verbalisations in response to their child's communication. In phase 2 (Parent-directed play), parents in the treatment group showed a reduction in their negative talk and their direct commands, compared to waitlist control parents. They also increased their use of labeled praise and used more elaborative verbal responses. During Phase 3 (Clean-up time), parents in the treatment group were less likely to ignore their child's verbal responses. Instead parents in the treatment group used more indirect-commands and

labeled praise to instruct their children to clean-up, compared to parents in the waitlist control group during Time 2 assessment. The results show that parents in the treatment group demonstrated changes in the way they interact with their children and they applied different parenting techniques according to the various situations in the Dyadic Parent-Child Interaction play activity. The parents' flexibility in skills application is a positive finding according to Azar (2002), who stated that competent parenting is about adaptability. Parents need to be flexible enough to adapt positively to the changing requirements and circumstances of their children. Parents can be adaptable when they have a capacity for problem solving and accurate perception of their child's capabilities.

Furthermore, the Parenting Information Project (PIP) (Commonwealth of Australia, 2004) review identified three themes that relate to the idea of adaptability: 'perceptiveness', 'responsiveness' and 'flexibility'. Perceptiveness refers to the acuteness of a parent's awareness of their child and what is happening around the child, and the effects of the parent's behavior on the situation and reflects the reciprocal nature of positive parent-child interaction, and the active role that children take in shaping their environment and influencing the way adult carers respond to them. Responsiveness describes the extent to which parents connect with their children. It refers to the ability of a parent to be sensitive to the child, to express warmth, respond with affection, and adjust his or her behavior based on the child's reactions and needs. Flexibility refers to the ability of a parent to respond in different ways according to the needs or demands of specific situations. Problems arise when parents lack alternative ways of responding, or get stuck in an ineffective pattern of responding and are unable to alter it. With reference to this guideline, there are initial changes in the parent-child interactions for the current sample, parent-child interaction is significantly more positive, less critical and demanding. In response, children are more willing to respond to their parents

socially using joint attention. More research is required to further examine the maintenance of these changes in a longitudinal study.

Profile of Parents and Intervention Effects

The current study hinted lower SES of parents may predict better treatment effect. This study is consistent with the moderator analyses conducted by Gardner, Hutchings, Bywater, and Whitaker (2010), which suggested that the parent training intervention effects were potentially moderated by having a very low income (compared to the average for these low income areas), by having a single parent, by having a mother who had given birth as a teenager, or by initial severity of observed child problem behavior. They noted that trends were generally in the direction of children of more disadvantaged parents doing better following intervention.

In addition, Western acculturated parents may also have better intervention outcome. Possible explanations include, these parents may relate to or understand the vignettes better. They are probably also more able to access the IY website to read other resources and books in between sessions to enhance their understanding of the parenting strategies.

Parents who perceived time-out and routine as being useful may also have more positive outcome, based on their self-reported and spouse-reported parenting respectively. Clinicians may do well to place more time and emphasis on teaching these strategies in the future. One caveat, while the partial correlations between the parent characteristics and intervention effects (with baseline measures as statistical controls) just alluded to were significant statistically before the Bonferroni correction was applied, they became statistically non-significant with the correction for multiple comparisons.

Profile of parents who did better in observed parent-child interactions appear to be more complex and parents with specific demographics may do well in different parenting skills. For instance, while parents with an unemployed status may have a better outcome in

the reduction of verbal unresponsiveness, employed parents may have a better outcome in the increase of labeled praise. Another potentially relevant demographic factor is that married parents also had a better outcome in verbal elaboration. The results provide some indication that the application of verbal responsiveness may require a stable home environment and parents with unemployed status may spend more time at home to practice the skills. It is a speculation that these more complex coaching skills may require more time and practice to be acquired and so the application might have been influenced by parenting capacity, which refers to the ability to parent in a 'good enough' manner long term (Conley, 2003). The assessment of parenting capacity is common in the Child Protective Services in order to protect children from risk and enhance their developmental experiences as well as in deciding whether to remove and/or restore children to the care of their parents. Parenting capacity is context driven, and highly dependent on factors such as culture, values and beliefs, socioeconomic circumstances, and proximity to family support (White, 2005). Clinicians in working with parents of children with developmental disabilities in the community setting may benefit from assessing parents' parenting capacity in order to decide what kind of support and length of intervention would be required to maximize parents' capacity to acquire the coaching skills. However, caution must be taken when interpreting these correlations because they became statistically non-significant with the correction for multiple comparisons. The impact on parenting capacity in influencing parents' acquisition and application of coaching techniques is required to be further investigated in future research to confirm the accuracy of our interpretation.

Summary of Quantitative Results

In sum, results of this investigation suggest that the Incredible Years Basic Pre-School program is efficacious, feasible, and perhaps effective – in view that the intervention was conducted by regular staff in a local community clinic, and the participants were recruited

from the regular clinic client population of parents with developmentally delayed children in Hong Kong. Parents' reports of parenting stress as well as child behavior problems on the Child Behavior Checklist (CBCL) significantly reduced at post-intervention. Parents rated the sessions as helpful and most of the parents (72%) maintained high levels of attendance. Attendance rates and consumer satisfaction data are important in establishing feasibility, as well as evaluating the impact and applicability of this treatment, which has substantial empirical research support, in the community setting of Hong Kong.

Qualitative Information

In this section, the perceptions and experiences of the participating parents are highlighted. Participants' feedbacks were collected by an online questionnaire emailed to the parents following the final session. Their feedback was translated into English.

Changes in Child Behaviors, Parenting Strategies, in Parent–child Relationship and in Family Relationship.

The participants also reported changes in their parenting strategies and improvement in parent child relationship and communication. Such change in parent–child relationship and communication was also reinforced through activities introduced through the program, such as paired reading, child-directed play, and talking with their children. One participant described her experiences as follows:

> *"The "routine" technique helped children understand the priorities and increased my child's motivation to complete tasks. For example, now my child can take the initiative to complete his homework. The "reward chart" encouraged my child to do something he did not intend to do, for example, picking up toys. "Emotion coaching" assisted my child to expand his emotional vocabulary, my child is now able to clearly describe his feelings and needs with details, for example, "I'm hungry, I want to eat some*

bread", whereas before the parenting program he used to only know how to say" bread ". Moreover, my child is now more willing to follow commands and rules, with the taught techniques, he is able to remain in the time-out chair. Gradually, the consistencies in parenting techniques prompted the development of independence in my child because he is now able to suggest appropriate reward for his good behaviors and consequences for his misconduct. For example, he can suggest additional television time as a reward for staying calm and no television time if he throws tantrums. We have made a drastic improvement in our parent-child relationship as a result of more time spent on play time, paired reading and less time fighting. Ignore and time-out are particularly important to me because both my child and myself can take a few minutes to calm down. In the past, we did not know how to use time-out effectively and we would always have arguments which would escalate into a huge "explosion". My husband and I have learned to understand how to handle children's misbehaviors, such as ignoring attention-seeking behaviors, and now both of our approaches are more consistent and our marital relationship is more harmonious too." Written by the full-time mother of a 3 year-old boy with global developmental delay.

The above quotation illustrates that besides changes in parent–child relationship, some participants reported positive changes in family relationship, as well as their own confidence in parenting.

Useful Aspects of the Program

The parent participants were very positive about the format and practicality of the program. Below is an example provided by a working mother of a five year-old boy with

suspected Autism Spectrum Disorder:

> *"The program was very practical and applicable for working moms like me. Format of the lesson was good (e.g., not just information giving, but also some discussions and role play). Role play closely resembles the daily situations I encounter. The small class size was good because it made group discussion, interaction and exchange of experience possible. Homework was well planned and covers key concepts in the lesson. Good email reminders, good preparatory notes and readings, and the Saturday class time made this class possible for even busy moms like me.*

Areas Requiring Improvement

Though the parent participants were very positive about the program, they also pointed out various aspects requiring improvement. They worried that they may not be able to apply the same techniques when their child becomes older. The length of the program (12 sessions) was also a concern and they suggested that the program should be longer. Two fathers expressed their views in the following quotes:

> *"I think it would be even more helpful for our children's development and family harmony and if we had been able to start learning from these parenting courses before the child was two years old."* Written by father of 3 year-old child with suspected social communication disorder.
>
> *"I hope that class time can be extended by at least 30-60 minutes, so that I can have even more time to exchange ideas, practice role-play for longer and engage in in-depth discussion with other parents. Adding an "advanced class" for children older than 7 years old so that we can learn the parenting skills to optimally support and guide older children and better handle the pressures, challenges of facing the changes and added*

academic stresses of primary school life." Written by father of 3 year-old child with suspected social communication disorder.

Intervention Content and Effective Therapeutic Process

The Clinician and group facilitator shared their impressions about the intervention content and effective therapy process elements that led to change for the Chinese families with children with developmental disabilities. The Clinician nominated the sessions covering praise and reward and controlling upsetting thoughts as the critical content for achieving outcomes.

Some of these parents are career women who have been high-achieving and successful throughout their lives. The shock and disappointment of having to raise a child with developmental disabilities were especially difficult for them because they held high expectations for their child. Some of their unrealistic expectations were made more pronounced by the education system in Hong Kong, which often aims to teach children skills beyond their developmental level. Praise, reward and time-out are concepts that were familiar to these parents, but the implementation was difficult because of certain cognitions they held toward their child. The Clinician needed to guide the parents' thinking throughout the whole course for parents to be able to apply the techniques through brainstorm and values self-reflection exercises and cognitive reframing. Factual information about their children's developmental milestones in the areas of pre-academic skills, social skills and behaviors at the beginning of the course was crucial for assisting parents to set realistic and age-appropriate goals for their child.

Another useful adaptation was the use of Dweck's (2006) concept of the growth mindset to reframe parents' cognitions so that they were more willing to praise and reward gradual improvements and gains, rather than praising only perfect behaviors. The Clinician needed to present research evidence on child development to encourage the parents to

reconsider their approaches. For example, an article on "Why Praise can be bad for kids" (D'Arezzo, 2013) were taken from the media and used to stimulate and challenge parent's thinking during group discussion.

Regarding time-out, many parents had erroneous understanding that it was a very harsh and hostile method of discipline and the use was often disapproved by the participating parents or family members. Understanding that the aim of time-out is for children to learn to regulate their emotions and to calm down for a few minutes following a tantrum was effective in alleviating these parents' concerns and anxiety about the technique of time-out. Once parents' cognitions were guided and reframed, they were able to apply the techniques with flexibility.

The Clinician and group facilitators felt that intervention effects depended substantially on the extent to which that parents were supported in extensive practice in role-play and home activities. It was therefore necessary to make homework assignments as individualized as possible. For example, individualized reward charts and routine charts were made during the class and scripted role-play were written to assist parents to explain to their child in a language that is developmentally-appropriate to maximize parents' ability to engage in role-play and to generalize the skills at home. This made the application of skills concrete and engaged each parent in a clear social contract for the week. Moreover, for children who attended the centre for preschool, collaboration with their teachers was essential for program success because these teachers could act as a support person for the parents to enhance program effectiveness by utilizing the same set of strategies for the targeted child at preschool.

Chapter 6: Conclusion

The quantitative data indicated significant differences between the intervention and comparison group in terms of post-intervention child behavior problems and parenting stress, with the intervention group reporting reduced behavior problems and lower parenting stress. Parent-child interaction was also more positive, less critical and demanding. Parents' conversations with their children were more elaborate. Children were more likely to respond to their parents in the form of joint attention and they were more affectionate towards their parents during child-directed play. The quantitative data were also corroborated by the qualitative data. Not only did the parents report changes in child behavior and more confidence in parenting, preschool teachers also observed such changes in child behavior and parenting. The changes or improvements in child behavior problems and parenting stress were similar to other local parenting programs (Triple P: Leung et al., 2003; HOPE-30: Leung, Tsang, Dean, & Chow, 2009), but the present study included also observations from spouse for triangulation. These results indicate that the Incredible Years parenting program is relevant and efficacious for parents with children with developmental disabilities in its content, and process are relevant for this population and need only minor tailoring to be effective for children with developmental disabilities and their parents.

The study highlights the importance of evidence-based practice, and it demonstrates that this can be achieved within a community setting. The program was conducted in a Special needs pre-school, not university research centers, and the preschool welcomed the program throughout the study. This study is essential for answering policy questions on whether parenting programs can be rolled out into regular, accessible services. This study shows that it is possible to deliver effective programs in "real-world settings" to parents of high-risk children.

The feasibility of the program is demonstrated by the parents' high satisfaction ratings, homework compliance, low attrition and positive parent feedback. Through makeup sessions, weekly email reminders, maximizing parents and staff support taking a collaborative process, and minor cultural adaptations, parent's engagement was high, and attrition was low.

Furthermore, this study adopted a multi-method (e.g. questionnaires, interview, observation) and multi-informant (e.g. parents, spouses, child) comprehensive approach, which increases its validity and reduces potential parent rating bias.

The current study adds to the research literature by helping to clarify, albeit tentatively, which Chinese family characteristics may predict better intervention effects, and what the critical ingredients may be for contributing to intervention success under real-world conditions. Specifically, lower parental SES, more acculturated to Western values, and endorsement of time-out and routine may predict better intervention effects. As noted earlier, these correlations were statistically significant when considered by themselves; they became non-significant once statistical correction for multiple comparisons was applied. So, at best these findings need to be interpreted with caution. Nonetheless, they suggest that clinically it might be helpful to identify with greater precision the types of clients for whom an intervention of interest may be particularly suitable, or conversely, subgroups for whom extra or even alternative therapeutic effort may be needed.

The current findings also help reassure practitioners that parenting intervention – the Incredible Years as a case in point, can be effective for client groups traditionally thought to be hard-to-treat (e.g., families with special needs children). They may also inform practitioners as to whether interventions meet the needs of different demographic groups, such as for girls and boys and for families with diverse ethnic backgrounds. Early identification of "high-risk" families is crucial for prevention and treatment success.

To summarize, this is the first study conducted in a major Asian city, namely Hong Kong, to systematically evaluate the effectiveness of the Basic Incredible Years (IY) Parent Training program for parents of preschoolers with developmental disabilities. In addition, this study has several strengths. First, an evidence-based and well researched intervention model was used. The intervention emphasized collaboration and the development of positive parenting strategies to help parents learn to be positive role-models for their children and to promote children's self-regulatory skills, for example, using slow-breathing techniques during time-out to help children to calm down. In addition, the low dropout rate, high attendance and levels of satisfaction endorse the acceptability of the IY model in Hong Kong. Methodological strengths include the randomized controlled trial (RCT) study design, including comparable samples in the two conditions. Further, data was collected using multi-methods (including observational measures) and multi-informants (e.g., spouse-reports), blind evaluators in both assessments and blind participants until group allocation, and a low attrition rate. All these positive aspects assure the study validity.

Limitations and Recommendations

Nevertheless the study has several limitations. The primary one is its small sample (N=52), which reduces the statistical power of the analysis to detect small effects. Further refinement of the research using a larger sample size would be useful in allowing sub-group analyses to detail the treatment outcome for parents of children with different diagnoses (e.g. children with ASD, children with ADHD and children with comorbid diagnoses).

Second, the generalization of findings must be carefully interpreted, due to a potential sample selection bias, since not all families might have been willing to participate in this study because of its length. The current finding may be positively biased because it may have involved a highly-motivated sample group.

Thirdly, many of the parents with children with developmental disabilities have mental health problems such as depression, anxiety and marital struggles, but such problems were not explicitly measured in the current study. Parents with mental health problems tend to consume more time in group discussions and require more support from other parents and staff to be able to implement the techniques taught. These participants may experience greater personal or family stress and may need further support. Given their mental health risk factors, perhaps parents of children with developmental disabilities may also benefit from the ADVANCE components targeting parental risk factors, including stress, depression, anger problems and marital discord by targeting effective coping and communication strategies (Webster- Stratton, 2001). Future research could incorporate additional treatment components to directly address coping with stress and depression in families of children with developmental disabilities.

Both qualitative and quantitative data indicated that the Incredible Years program is feasible, efficacious, and highly appreciated by parents in Hong Kong. The parents also expressed concerns regarding the developmental challenges of their children with increasing exacting demand of education performance on their children when they transition into primary education. In view of the very demanding educational environment in Hong Kong, additional sessions on academic coaching and promoting school readiness may be required in future to address these issues for families with children with developmental disabilities.

In the current study, we have added Chinese subtitles in the vignettes to assist Chinese parents to better understand the American dialogues in the IYPT. In order to cater to parents with more traditional parenting beliefs and practices, it may be appropriate to adapt the program further for greater effectiveness. For example, including audio translations and adding more vignettes tailor-made to Chinese families (e.g. coaching children's social skills during a Chinese dinner, academic and persistence coaching when children are completing

their Chinese homework), translating the textbook for the BASIC programs , titled *The Incredible Years: A Troubleshooting Guide for Parents* (Webster-Stratton, 2006) and other parents resources available on the IYPT websites may deepen parents' understanding and consolidation of the parenting techniques.

However, though the Basic IYPT is effective for the Chinese parents of children with developmental disabilities, provision of parent training in preschools is often limited by resource constraints because the Hong Kong government does not fund free preschool education (Rao & Li, 2009). Social services centres also have various service quota to meet. The labour-intensiveness program demanding professionals with experience with working with families with developmental disabilities and with cognitive-behavioral therapeutic skills to conduct the program after regular office-hours to cater for working parents can mean high program costs. How to make the intervention more cost-efficient is an important research agenda. For example, allowing parents to view the vignettes online, to have online parents' discussion groups and with homework and role-play monitored by psychologists could make this program even more affordable and accessible. In the current study, the intervention was delivered by only one Clinical Psychologist and in one community clinical setting. Training service staff (e.g. frontline staff, social workers, and teachers) to deliver this program may make the program more cost-effective and more accessible to service users of different settings. How well the results will generalise to other intervention group leaders remain to be evaluated in research. Translating the program manual into Chinese and having a Cantonese-speaking accredited Incredible Years trainer to deliver these staff training for frontline staff is required in order for the program to be more affordable and localised.

Moreover, future studies should compare IYPT effects to parent training plus other components, to analyse possible additional intervention benefits (Webster-Stratton, Reid, & Beauchaine, 2013). The Incredible Years (IY) includes components for children, for parents

and for teachers. Each can be administered separately but they are believed to be more effective in combination. Given more funding, a comprehensive intervention program comprising of parallel parent and child workshops could be the treatment of choice for this population sample. Organisations need to have a long-term vision for promoting child development and be prepared to invest in training and supervision to ensure that their team of staff meets the fidelity process (Webster-Stratton, Reid, & Marsenich, 2014). It may help to educate funding bodies on cost-analyses indicating that effective early childhood programs generate benefits to society that far exceed program costs. Responsible investments focus on effective programs that are staffed appropriately, implemented well, and improved continuously. Extensive analysis by economists has shown that education and development investments in the earliest years of life produce the greatest returns and will potentially benefit the community through reduced crime, welfare, and educational remediation, as well as increased tax revenues on higher incomes for the participants of early childhood programs when they become adults. Although this would require significant increases in short-term funding, effective programs for such highly vulnerable, young children are likely to generate a substantial return on investment through significant reductions in the later costs of special education, grade retention, welfare assistance, and incarceration (Center on the Developing Child at Harvard University, 2007).

More evidence for using the IY as a first-line tool for early intervention for parents of children at risk for developmental disabilities is still needed. The present results must be replicated in future studies in Chinese involving larger randomized samples. Efforts should also be made to evaluate this program with parents of Chinese preschoolers at risk for developmental disabilities in different contexts in order to examine the replicability of the intervention effects documented here. Inclusion of domestic helpers and extended family members should be explored to increase the transferability of parenting skills and principles.

Because neural science indicates that children develop in an environment of relationships (National Scientific Council on the Developing Child, 2004a), the Chinese cultural emphasis on the interdependence of family members is a protective factor which has the potential to release the stresses of parenting in the complex society of Hong Kong if consistencies in parenting can be achieved to create a community which is enriched and supportive to nurture the development of this particularly vulnerable but hopeful population.

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Appendices

Appendix A: HOME-Life Interview *(Leventhal et al., 2004)*

i) Primary participant

以下是一些關於你處理自己的情緒及與*****發生衝突時的問題。

在過去的**一週**，你有多常於*****面前表現得很懊惱/憂慮或在*****面前哭?	幾乎每天 1 幾次 2 一次 3 上週沒有 4
在過去的**一週**，你有多常於*****面前發脾氣?	幾乎每天 1 幾次 2 一次 3 上週沒有 4
在過去的**一週**, 你曾經體罰*****多少次?	幾乎每天 1 幾次 2 一次 3 完全沒有 4

在一**般**情況下，你認為你能令*****聽話及服從你的指令?	大部分時間 1 有時候 2 從來沒有 3
去超級市場時, 你會讓*****選擇一些他喜愛的食物嗎?	會 1 不會 2 從不帶*****到超級市場 3
你會讓*****選擇早餐/午餐中的一些食物嗎?	會 1 不會 2

在過去的一個月，你有多常…

在過去的一個月，你有多常與*****去圖書館?	沒有 1 一次 2 三到四次 3 四次以上 4
在過去一個月，你有多常鼓勵*****閱讀?	沒有 1 一次 2 三到四次 3 四次以上 4
與*****談到他在當天發生的事?	沒有 1 一次 2 三到四次 3 四次以上 4
稱讚他在學校，家裡，或一個活動中的一些成就?	沒有 1 一次 2 三到四次 3 四次以上 4
與他進行一些戶外活動? 如球類活動或踏單車?	沒有 1 一次 2 三到四次 3 四次以上 4
教他基本禮儀，如多謝/唔該?	沒有 1 一次 2 三到四次 3 四次以上 4

Now I have some questions about different ways that you handle emotional situations and conflict with his/her child.

During the past week, how often have you cried or been visibly upset in front of your child? Would you say….	Almost everyday 1 A few times 2 Once 3 Not at all 4
In the past week, about how many times have you lost his/her temper with your child? Would you say….	Almost everyday 1 A few times 2 Once 3

	Not at all 4
About how many times have you physically punished your child? Would you say….	Almost everyday 1 A few times 2 Once 3 Not at all 4

In general, do you think that you can get your child to listen to him/her and do what you want him/her to do? Would you say….	Most of the time 1 Sometimes 2 Never 3
When you are at the grocery store, do you let your child choose certain favourite foods?	Yes 1 No 2 Never bring our child to grocery store 3
Would you let your child choose certain foods in breakfast/lunch?	Yes 1 No 2

Now, just thinking about the past month, how often have you….

….gone to the library with your child?	Not at all 1 Once 2 3 to 4 times 3 More than 4 times 4
In the past month, how often have you	Not at all 1

encourage your child to read?	Once 2 3 to 4 times 3 More than 4 times 4
….spoken with your child about his/her day?	Not at all 1 Once 2 3 to 4 times 3 More than 4 times 4
….praised him/her for some accomplishment at school, at home, or for an activity?	Not at all 1 Once 2 3 to 4 times 3 More than 4 times 4

….done physical activities with him/her, like playing ball or riding a bike?	Not at all 1 Once 2 3 to 4 times 3 More than 4 times 4
….taught him/her basic manners like please and thank you?	Not at all 1 Once 2 3 to 4 times 3 More than 4 times 4

ii) Kin/Spouse version

以下是一些關於**你的配偶**處理他/她的情緒及與*****發生衝突時的問題。

在過去的一週，**你的配偶**有多常於*****面前表現得很懊惱/憂慮或在*****面前哭?	幾乎每天 1 幾次 2 一次 3 上週沒有 4
在過去的一週，**你的配偶**有多常於*****面前發脾氣?	幾乎每天 1 幾次 2 一次 3 上週沒有 4
在過去的一週, **你的配偶**曾經體罰*****多少次?	幾乎每天 1 幾次 2 一次 3 完全沒有 4

在一般情況下，**你的配偶**認為他能令*****聽話及服從你的指令?	大部分時間 1 有時候 2 從來沒有 3
去超級市場時, **你的配偶**會讓*****選擇一些他喜愛的食物嗎?	會 1 不會 2 從不帶*****到超級市場 3
你的配偶會讓*****選擇早餐/午餐中的一些食物嗎?	會 1 不會 2

在過去的**一個月**，**你的配偶**有多常…

與*****去圖書館?	沒有 1 一次 2 三到四次 3 四次以上 4
在過去一個月，**你的配偶**有多常鼓勵*****閱讀?	沒有 1 一次 2 三到四次 3 四次以上 4
與*****談到他在當天發生的事?	沒有 1 一次 2 三到四次 3 四次以上 4

稱讚他在學校，家裡，或一個活動中的一些成就?	沒有 1 一次 2 三到四次 3 四次以上 4
與他進行一些戶外活動? 如球類活動或踏單車?	沒有 1 一次 2 三到四次 3 四次以上 4
教他基本禮儀，如多謝/唔該?	沒有 1 一次 2 三到四次 3 四次以上 4

Now I have some questions about different ways that your spouse handle emotional situations and conflict with his/her child.

During the past week, how often have **your spouse** cried or been visibly upset in front of your child? Would you say….	Almost everyday A few times Once Not at all	1 2 3 4
In the past week, about how many times have **your spouse** lost his/her temper with your child? Would you say….	Almost everyday A few times Once Not at all	1 2 3 4
About how many times have **your spouse** physically punished your child? Would you say….	Almost everyday A few times Once Not at all	1 2 3 4

In general, do you think that **your spouse** can get your child to listen to him/her and do what your spouse want him/her to do? Would you say….	Most of the time Sometimes Never	1 2 3
When **your spouse** is at the grocery store, does your spouse let your child choose certain favorite foods?	Yes No Never bring our child to grocery store	1 2 3
Would **your spouse** let your child choose	Yes	1

certain foods in breakfast/lunch?	No	2

Now, just thinking about the past month, how often has **your spouse**….

….gone to the library with your child?	Not at all Once 3 to 4 times More than 4 times	1 2 3 4
In the past month, how often have **your spouse** encourage your child to read?	Not at all Once 3 to 4 times More than 4 times	1 2 3 4
….spoken with your child about his/her day?	Not at all Once 3 to 4 times More than 4 times	1 2 3 4
….praised him/her for some accomplishment at school, at home, or for an activity?	Not at all Once 3 to 4 times More than 4 times	1 2 3 4

….done physical activities with him/her, like playing ball or riding a bike?	Not at all Once 3 to 4 times More than 4 times	1 2 3 4
….taught him/her basic manners like please and thank you?	Not at all Once 3 to 4 times More than 4 times	1 2 3 4

Appendix B: Parent- Child Interaction Procedure

(Eyberg, Nelson, Duke, & Boggs, 2004)

1. Child-Directed Interaction (CDI) 5 minutes.

"In this situation, tell (child's name) that he/she may play whatever he/she chooses. Let him/her choose any activity he/she wishes. You just follow his/her lead and play along with him/her."

2. Parent-Directed Interaction (PDI), 5 minutes.

"That was fine. Now we'll switch to another situation. Tell (child's name) that it is your turn to choose the game. You may choose any activity. Keep him/her playing with you according to your rules."

3. Clean-up, 5 minutes.

"That was fine. Now I'd like you to tell (child's name) that it is time to leave and the toys must be put away. Tell him/her that you want him/her to put the toys away. Make sure you have him/her put them away."

Note:

Phase 1: Coding begins when the choice of toys on the desk is touched by either parent or child.

Coding ends when the parents make a command to switch toys.

Phase 2: Coding begins when the choice of toys on the desk is decided and is touched by either parent or child. There may be a transition period between Phase 1 and 2.

Coding ends when the parent makes a command to child to clean up. Phase 3 begins.

Phase 3: Coding ends when toys are placed back in the box.

Once start and end times are calculated, frequency scores are converted into rates per minute using the below formula

Rates per minute= Frequency/ [(End time- start time) ÷ 60]

CODING CATEGORIES	
PARENT CATEGORIES	CHILD CATEGORIES
Negative talk (NTA) *Direct Command (DC) with falling tone *Indirect Command (IC) Labeled Praise (LP) Unlabeled Praise (UP) Joint attention_initiated (PJI) Joint attention_responded (PJR) Verbal responsiveness(VR)	Affect (AFFECT) Compliance(CO) Non-compliance (NC) Joint attention_initiated(CJI) Joint attention_responded (CJR)

*** Required to be coded by both Adult and Child coders.**

Priority Order

When a behavior contains elements of more than one category within a class of behavior, only one category is coded. A priority order has been established which lists the categories for each class in order of their importance to the quality of parent-child interaction.

Priority Order for the Parent Verbalisation
Negative Talk
Direct Command with falling tone
Indirect Command
Labeled Praise

Appendix C
Weekly Evaluation Survey

i) Session evaluation

***1. 孩子姓名 Child's name**

***2. 你與孩子的關係 Your relationship with child**

- 父親 Father
- 母親 Mother

***3. 你認為本課堂：課堂的內容 I found the content of this session**

	1 沒有幫助 not helpful	2 中立 neutral	3 有用 helpful	4 非常有用 very helpful
請以1到4表示沒有幫助至非常有用				

***4. 錄像片段例子 Video-clips of parent child interaction**

	1 沒有幫助 not helpful	2 中立 neutral	3 有用 helpful	4 非常有用 very helpful
請以1到4表示沒有幫助至非常有用				

***5. 講師的教學 Guidance from the facilitator**

	1 沒有幫助 not helpful	2 中立 neutral	3 有用 helpful	4 非常有用 very helpful
請以1到4表示沒有幫助至非常有用				

***6. 小組討論 Group discussion**

	1 沒有幫助 not helpful	2 中立 neutral	3 有用 helpful	4 非常有用 very helpful
請以1到4表示沒有幫助至非常有用				

***7. 角色扮演 Role-play**

	1 沒有幫助 not helpful	2 中立 neutral	3 有用 helpful	4 非常有用 very helpful
請以1到4表示沒有幫助至非常有用				

***8. 你對這課堂的滿意程度。Overall satisfaction with this session**

	極不滿意 extremely unsatisfied	不滿意 not satisfied	頗不滿意 somewhat unsatisfied	頗滿意 somewhat satisfied	滿意 satisfied	非常滿意 extremely satisfied
請以1到6表示極不滿意至非常滿意						

ii) Homework evaluation

Group 5 - Chinese session 4 hw

＊2. 你與孩子的關係 Your relationship with child：

- ◯ 父親 Father
- ◯ 母親 Mother

＊3. 上一堂，我們討論了用描述孩子的感受去增強孩子情感表達能力。Last lesson, we learned about describing children's feelings to expand their emotional vocabulary.
請評價這一週你與孩子使用這種策略時的經驗。Please rate your experience with this new technique.
我知道如何有效地描述孩子的感受。I understand how to describe my child's feelings.

	非常不同意 strongly disagree	不同意 disagree	無意見 neutral	同意 agree	非常同意 strongly agree
請以1到5表示非常不同意至非常同意	◯	◯	◯	◯	◯

＊4. 這個星期，我經常描述孩子的感受。this week, I frequently described my child's feelings.

	非常不同意 strongly disagree	不同意 disagree	無意見 neutral	同意 agree	非常同意 strongly agree
請以1到5表示非常不同意至非常同意	◯	◯	◯	◯	◯

＊5. 在描述孩子的感受時，我感到自在和自信。I feel confident and at ease when describing my child's feelings.

	非常不同意 strongly disagree	不同意 disagree	無意見 neutral	同意 agree	非常同意 strongly agree
請以1到5表示非常不同意至非常同意	◯	◯	◯	◯	◯

＊6. 我發現描述孩子的感受是有助於增強孩子情感表達的能力。I found that describing my child's feelings will help my child to better expression how he feels.

	非常不同意 strongly disagree	不同意 disagree	無意見 neutral	同意 agree	非常同意 strongly agree
請以1到5表示非常不同意至非常同意	○	○	○	○	○

＊7. 上一堂，我們討論了促進學術和持久能力的遊戲方式。並用描述性評語，描述孩子的玩具、行動、 耐心、冷靜、持久力和專注力。 Last session, we discussed about Academic and Persistence Coaching, e.g.. using descriptive commenting to describe children's toys, behaviours, patience, attention, concentration.

請評價這一週你與孩子使用這種策略時的經驗。Please rate your experience with using this strategy:

我知道如何有效地與我的孩子玩耍，以提升孩子的學術和持久能力。I know how to effectively use academic and persistence to coach my child during play.

	非常不同意 strongly disagree	不同意 disagree	無意見 neutral	同意 agree	非常同意 strongly agree
請以1到5表示非常不同意至非常同意	○	○	○	○	○

＊8. 我發現花時間與孩子玩耍是有助於改善孩子的學術和持久能力。I found that using academic and persistence coaching during play is helpful in improving my child's patience.

	非常不同意 strongly disagree	不同意 disagree	無意見 neutral	同意 agree	非常同意 strongly agree
請以1到5表示非常不同意至非常同意	○	○	○	○	○

Appendix D
Final Evaluation Survey

1. 孩子姓名

2. 以下調查問卷是我們對您參加的《為人父母甚艱難》家長課程進行評估的一部分。您的回答應盡量誠實，這一點很重要。由此得到的信息將幫助我們評估和繼續改進所提供的課程。非常感謝您對合作，所有回答將受到嚴格保密。

A. 整體課程情況

請圈選最能夠表達您此時的真實感受的答案。

	非常糟	更糟	有點更糟	相同	略微改善	改善	很大改善
最初促使我為了孩子而參加家長教育課程的問題已經得到	○	○	○	○	○	○	○
對於我一直試圖改變的孩子的行為，在使用了本課程介紹的方法之後有	○	○	○	○	○	○	○

3. 我對孩子的進步情況感到

非常不滿意	不滿意	略微不滿意	中立	略微滿意	滿意	非常滿意
○	○	○	○	○	○	○

4. 《為人父母甚艱難》的家長課程在什麼程度上對與孩子沒有直接關係的其它個人或家庭問題有所幫助（例如您的婚姻關係、您的一般情感）？

	阻礙遠遠大於幫助	有阻礙	略有阻礙	沒有幫助	略有幫助	有幫助	非常有幫助也沒有阻礙
沒有幫助	○	○	○	○	○	○	○

5. 對於從《為人父母甚艱難》是否能夠獲得良好的結果，我的期望是

非常悲觀	悲觀	略微悲觀	中立	略微樂觀	樂觀	非常樂觀
○	○	○	○	○	○	○

6. 我感到在此課程中為了改進我孩子的行為而採用的方法是

非常不恰當	不恰當	略微不恰當	中立	略微恰當	恰當	極其恰當
○	○	○	○	○	○	○

7. 您願意向朋友或親戚推薦這個課程嗎？

強烈不推薦	不推薦	略微不推薦	中立	略微推薦	推薦	強烈推薦
○	○	○	○	○	○	○

8. 請圈選最能夠表達您此時的真實感受的答案。

	非常不自信	不自信	略微不自信	中立	略微自信	自信	非常自信
您對於在家裡自己處理當前的行為問題有多自信？	○	○	○	○	○	○	○
您對於在家裡用您在此課程中學到的方法來處理未來行為問題的能力有多自信？	○	○	○	○	○	○	○

9. 我對於我的孩子和家庭達到本課程目標的總體感覺是

非常負面	負面	略微負面	中立	略微正面	正面	非常正面
○	○	○	○	○	○	○

***2. C. 具體的家長教育方法**

有用性

在本節中，我們希望您能夠指出以下每種技巧對於改進您與孩子之間的互動和減少他/她目前的“不當”行為來說有多有用。請圈選能夠最準確地說明每種技巧的有用性的答案。

	非常沒用	沒用	略微沒用	中立	略微有用	有用	極其有用
由孩子主導的玩樂或特殊時間	○	○	○	○	○	○	○
描述性評論/社交、情感和學習指導	○	○	○	○	○	○	○
表揚和鼓勵	○	○	○	○	○	○	○
切實的獎勵（圖表）	○	○	○	○	○	○	○
常規活動 (例如: 早晨常規, 睡前常規)	○	○	○	○	○	○	○
不理會孩子的不當行為	○	○	○	○	○	○	○
正面的命令（例如 “當...時，則...”）	○	○	○	○	○	○	○
面壁思過以冷靜下來 (Time out)	○	○	○	○	○	○	○
互動讀書 (用描述，評論的方式閱讀)	○	○	○	○	○	○	○
幫助孩子的家庭作業和學習技能	○	○	○	○	○	○	○
幫助孩子學會解決問題	○	○	○	○	○	○	○
所有這些技巧總體而言	○	○	○	○	○	○	○

***3. D. 家長小組負責人的評估**

在本節中，我們希望您能夠表達對您的小組負責人的看法。請針對每個問題圈選一個最能說明您的感受的答案。

小組負責人: Maureen

	很差	差	低於平均水平	一般	高於平均水平	優異	極佳
我覺得小組負責人的講解	○	○	○	○	○	○	○
小組負責人的準備工作	○	○	○	○	○	○	○

***4. 關於小組負責人(Maureen)對我的關心以及對我和我與孩子的問題的關注程度而言，我**

非常不滿意	不滿意	略微不滿意	中立	略微滿意	滿意	非常滿意
○	○	○	○	○	○	○

***5. 此時，我覺得課程小組負責人(Maureen)的建議/教導，對我教導孩子有沒有幫助**

極其沒有幫助	沒有幫助	略微沒有幫助	中立	略微有幫助	有幫助	極其有幫助
○	○	○	○	○	○	○

***6. 關於我對小組負責人(Maureen)的個人感覺，我**

非常不喜歡他/她	不喜歡他/她	略微不喜歡他/她	他/她態度中立	略微喜歡他/她	喜歡他/她	非常喜歡他/她
○	○	○	○	○	○	○

*2. E. 課程總體評估

本課程的哪個部分對您最有幫助？

*3. 您最喜歡本課程的哪些內容？

*4. 您最不喜歡本課程的哪些內容？

*5. 怎樣能夠改進本課程，從而為您提供更多幫助？

Appendix E:

Parent Group Leader Collaborative Process Checklist

Parent Group Leader Collaborative Process Checklist

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This checklist is designed for group leaders to complete together following a session, or for a group leader to complete for him/herself when reviewing a video of a session. By watching the video of a session and looking for the following points, a leader can identify specific goals for progress. This checklist is designed to complement the checklist for the specific session, which lists the key content that should be covered.

Leader Self-Evaluation (name):_____
Co-leader Evaluation:_____
Certified Trainer/Mentor Evaluation:_____
Date:_____
Session Topic:_____

SET UP *Did the Leaders:*	**YES**	**NO**	**N/A**
1. Set up chairs in a semicircle that allowed everyone to see the TV? (Avoid tables.)	____	____	____
2. Sit at separate places in the circle, rather than both at the front?	____	____	____
3. Write the agenda on the board?	____	____	____
4. Have last week's home activities ready for the parents to pick up, complete with praise and encouragement written on them?	____	____	____
5. Plan and prepare for daycare in advance?	____	____	____
6. Prepare and lay out the food, in an attractive manner?	____	____	____

REVIEW PARENT'S HOME ACTIVITIES *Did the Leader:*			
7. Begin the discussion by asking how home activities went during this past week?	____	____	____
8. Give every parent the chance to talk about his/her week?	____	____	____
9. Praise and encourage parents for what they did well and recognize their beginning steps at change, rather than correct their process?	____	____	____
10. Highlight key "principles" that their examples illustrate? (e.g., write them on flip chart or paraphrase idea.)	____	____	____
11. Explore with individuals who didn't complete the home activities what made it difficult (barriers) and discuss how they might adapt home activities to fit their needs and goals?	____	____	____

	YES	NO	N/A
12. Ask about and encourage "buddy calls"?	____	____	____
13. If a parent's description of how they applied the skills makes it clear that s/he misunderstood, did the leaders accept responsibility for the misunderstanding rather than leaving the parent feeling responsible for the failure? (e.g., "I'm really glad you shared that, because I see I completely forgot to tell you a really important point last week. You couldn't possibly have known, but when you do that, it's importnat to..." vs "You misunderstood the assignment. Remember, when you do that, it's important to...")	____	____	____
14. Make sure that the discussion is brought back to the specific topic at hand after a reasonable time without letting free flowing discussion of other issues dominate?	____	____	____
15. Limit the home activity discussion (aprroximately 20-30 minutes) to give adequate time for new learning?	____	____	____
WHEN BEGINNING THE TOPIC FOR THE DAY *Did the Leader:*			
16. Begin the discussion of the topic with open-ended questions to get parents to think about the importance of the topic?	____	____	____
17. Do the benefits and/or barriers exercise regarding the new topic?	____	____	____
18. Paraphrase and highlight the points made by parents - write key points on the board with their name?	____	____	____
WHEN SHOWING THE VIGNETTES *Did the Leader:*			
19. Focus parents on what they are about to see on the vignettes and what to look for?	____	____	____
20. Begin by asking an open-ended question about what parents thought was effective/ineffective in the vignette?	____	____	____
21. Acknowledge responses one or more parents have to a vignette?	____	____	____
22. Paraphrase and highlight the points made my parents - writing key points on the board?	____	____	____
23. Move on to the next vignettes after key points have been discussed, rather than let the discussion go on at length?	____	____	____
24. Use vignettes to trigger appropriate discussions and/or practices?	____	____	____
25. Redirect group to the relevance of the interaction on the vignette for their own lives (if parents become distracted by some aspect of the vignette, such as clothing or responses that seem phony)?	____	____	____
26. Refer to parents' goals for themselves and their children when discussing vignettes and learning principles?	____	____	____

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PRACTICE AND ROLE PLAYS

Did the Leader:

	YES	NO	N/A
27. Get parents to switch from talking about strategies in general to using the words they could actually use? (e.g., from "She should be more specific" to "She could say, John, you need to put the puzzle pieces in the box.")	____	____	____
28. Ensure that the skill to be practiced has been covered in the vignettes or discussion prior to asking someone to role play it. (This ensures the likelihood of success.)	____	____	____
29. Do several planned role plays over the course of the session? Number of role plays: ____	____	____	____
30. Do role plays in pairs or small groups that allow multiple people to practice simultaneously?	____	____	____
31. Use all of the following skills when directing role plays:			
a. Select parents and give them appropriate roles?	____	____	____
b. Skillfully get parents engaged in role plays?	____	____	____
c. Provide each person with a description of his/her role (age of child, level of misbehavior)?	____	____	____
d. Provide enough "scaffolding" so that parents are successful in their role as "parent" (e.g., get other parents to generate ideas for how to handle the situation before practice begins)?	____	____	____
e. Invite other workshop members to be "coaches" (call out idea if the actor is stuck)?	____	____	____
f. Pause/freeze role play periodically to redirect, give clarification, or reinforce participants?	____	____	____
g. Take responsibility for having given poor instructions if role play is not successful and allow actor to rewind and replay?	____	____	____
32. Process role playing afterwards by asking how "parent" felt and asking group to give feedback?	____	____	____
33. Process role play by asking how "child" felt in role?	____	____	____
34. Solicit feedback from group about strengths of parent in role?	____	____	____
35. Offer detailed descriptive praise of the role play and what was learned?	____	____	____
36. Re-run role play, changing roles or involving different parents (not always needed, but helpful to do for a parent who needs modeling by someone else first)?	____	____	____

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	YES	NO	N/A
LEADER GROUP PROCESS SKILLS *Did the Leader:*			
37. Build rapport with each member of group?	____	____	____
38. Encourage everyone to participate?	____	____	____
39. Use open-ended questions to facilitate discussion?	____	____	____
40. Reinforce parents' ideas and foster parents' self-learning?	____	____	____
41. Encourage parents to problem-solve when possible?	____	____	____
42. Foster idea that parents will learn from each others' experiences?	____	____	____
43. Help parents learn how to support and reinforce each other?	____	____	____
44. View every member of group as equally important and valued?	____	____	____
45. Identify each family's strengths?	____	____	____
46. Create a feeling of safety among group members?	____	____	____
47. Create an atmosphere where parents feel they are decision-makers and discussion and debate are paramount?	____	____	____
ENDING GROUP - REVIEW & HOME ACTIVITIES *Did the Leader:*			
48. Begin the ending process with about 15 minutes remaining?	____	____	____
49. Summarize this session's learning? (One way to do this is to review or have the parents review each point on refrigerator notes out loud.)	____	____	____
50. Review or have parents review the home activity sheet, including why it is important, and how they will try to do it?	____	____	____
51. Talk about any adaptations to the home activity for particular families?	____	____	____
52. Show support and acceptance if parents can't commit to all the home activities? (Support realistic plans.)	____	____	____
53. Have parents complete the Self-Monitoring Checklist and commit to goals for the week?	____	____	____
54. Check in on buddy calls?	____	____	____
55. Have parents complete the evaluation form?	____	____	____
56. End the session on time?	____	____	____

REMEMBER: The goal in the group sessions should be to draw from the parents the information and ideas to teach each other. They should be the ones who generate the principles, describe the significance, highlight what was effective and ineffective on the video, and demonstrate how to implement the skills in different situations. People are far more likely to put into practice what they talk about than what they hear about.

Summary Comments:

Appendix F:

Incredible Years Parent Group Peer and Self-Evaluation Form

INCREDIBLE YEARS® PARENT GROUP
PEER AND SELF-EVALUATION FORM

Please ask your co-leader to comment on your group leader skills for one of your group sessions, using this form. Also use this form to self-evaluate your session. Afterwards talk about these evaluations together and make goals for your next session. Reviewing video of your own group leader skills is a valuable learning experience and part of continuing to learn to deliver the program with high fidelity.

Leader's Name _____

Please comment on the parent group leader's session(s) based on the following criteria:

I. LEADER GROUP PROCESS SKILLS	*COMMENTS*
Builds rapport with each member of group	
Encourages everyone to participate	
Models open-ended questions to facilitate discussion	
Reinforces parents' ideas and fosters parents' self-learning	
Encourages parents to problem-solve when possible	
Fosters idea that parent will learn from each others' experiences	
Helps parents learn how to support and reinforce each other	
Views every member of group as equally important and valued	
Identifies each family's strengths	
Creates a feeling of safety among group members	
Creates an atmosphere where parents feel they are decision-makers and discussion and debate are paramount	

II. LEADER LEADERSHIP SKILLS	*COMMENTS*
Ground rules posted for group and reviewed	
Started and ended meeting on time	
Explained agenda for session and invited input	
Emphasizes the importance of homework	
Reviews homework from previous session	
Summarizes and restates important points	
Focuses group on key points presented	
Imposes sufficient structure to facilitate group process	
Prevents sidetracking by participants	
Knows when to be flexible and allow a digression for an important issue and knows how to tie it into session's content	
Anticipates potential difficulties	
Predicts behaviors and feelings	
Encourages generalization of concepts to different settings and situations	
Encourages parents to work for long-term goals as opposed to "quick fix"	
Helps group focus on positive	
Balances group discussion on affective and cognitive domain	
Predicts relapses	
Reviews handouts and homework for next week	
Evaluates session	

III. LEADER RELATIONSHIP BUILDING SKILLS	*COMMENTS*
Uses humor and fosters optimism	
Normalizes problems when appropriate	
Validates and supports parents' feelings (reflective statements)	
Shares personal experiences when appropriate	
Fosters a partnership or collaborative model (as opposed to an "expert" model)	
Fosters a coping model as opposed to a mastery model of learning	
Reframes experiences from the child's viewpoint and modifies parents' negative attributions	
Strategically confronts, challenges and teaches parents when necessary	
Identifies and discusses resistance	
Maintains leadership of group	
Advocates for parents	

IV. LEADER KNOWLEDGE	*COMMENTS*
Demonstrates knowledge of content covered at session	
Explains rationale for principles covered in clear, convincing manner	
Prepares materials in advance of session and is "prepared" for group	
Integrates parents' ideas and problems with important content and child development principles	
Uses appropriate analogies and metaphors to explain theories or concepts	

V. LEADER METHODS	*COMMENTS*
Uses video examples efficiently and strategically to trigger group discussion	
Uses role play and rehearsal to reinforce learning	
Review homework and gives feedback	
Uses modeling by self or other group members when appropriate	

VI. PARENTS' RESPONSES	*COMMENTS*
Parents appear comfortable and involved in session	
Parents complete homework, ask questions and are active participants	
Parents complete positive evaluations of sessions	

Summary Comments: _____

_____

Candidate has satisfied video requirements for certification. ____ Yes ____ No

Name of Evaluator _____

Date: _____