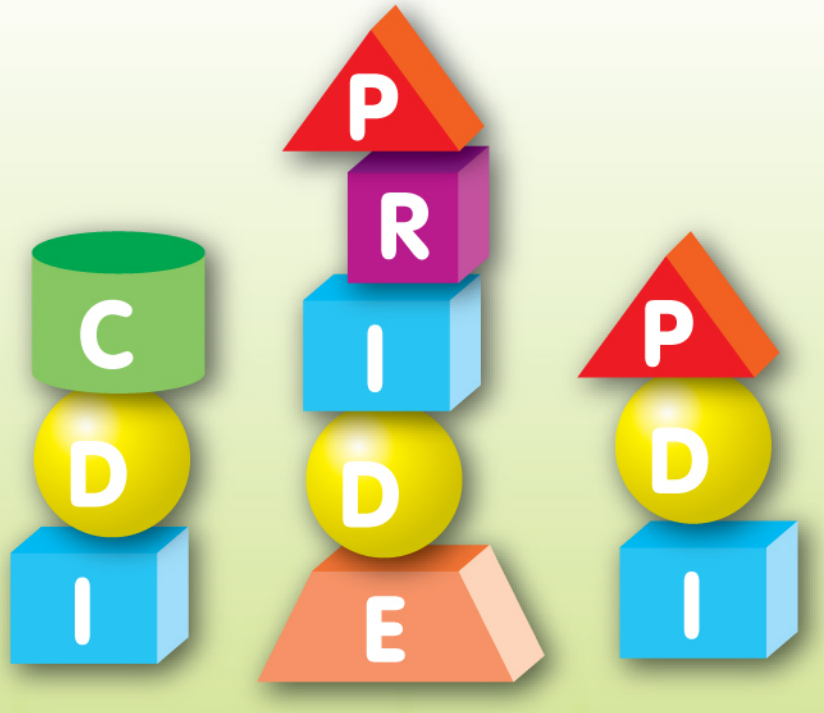
The outcome and process evaluation of the Parent-Child Interaction Therapy (PCIT) in treating families with children with behaviour problems in Hong Kong



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Executive Summary

Introduction: This study examined the effectiveness of the Parent Child Interaction Therapy (PCIT) with Chinese parents and children in Hong Kong. Both outcome and process evaluation were conducted.

Methods: Quantitative and qualitative data were collected. The data on outcome evaluation was collected from 48 intervention group and 62 comparison group parent participants. The mean age of the target children was 5.28 years. Participants had to complete questionnaires on child behaviour problems (Eyberg Child Behaviour Inventory) and parenting stress (Parenting Stress Index) before and after intervention. For process evaluation, 17 parent participants and the PCIT therapists participated in focus group discussions to share their views and experience of the PCIT.

Results: The quantitative data was analysed using univariate analysis of covariance (ANCOVA) with pre-intervention scores as covariates. The results indicated that, after intervention, the intervention group participants reported lower child behaviour problem and parenting stress scores than the comparison group participants. The effect sizes ranged from 0.97 to 1.59. The intervention group participants were able to maintain the changes in child behaviour and parenting stress 3 to 6 months after completion of intervention. There were also significant decreases in inappropriate child management strategies and significant increases in positive parenting practices. Examination of the process issues suggested some factors conducive to the initial success including the intense and professional therapist support with one-to-one coaching on-the-spot, regular homework, trainer-trainee relationship, the client-centred, empowerment and educational approach in programme delivery, the play element, the emphasis on a positive focus in programme content, and the programme goal with its emphasis on the re-structuring of the parent-child relationship.

Discussion: Overall, the results suggested that PCIT was effective in reducing child behaviour problems, parenting stress, inappropriate child management strategies and increasing positive parenting practices among Chinese parents with young children in Hong Kong. Cultural issues in the application of PCIT to Chinese parents and culturally appropriate strategies would need to be further considered.

Chapter 1: Introduction

1. Research Background

In this chapter, relevant background information related to the evaluation of the Parent-Child Interaction Therapy (PCIT) would be introduced. The PCIT is designed as a programme for reducing child behaviour problems (Hembree-Kigin & McNeil, 1995) for parents with problems in parenting, with children aged 2 to 8, and has been found to be useful for abusive parents (Chaffin et al., 2004).

1.1 The prevalence of child behaviour problems in Hong Kong

An earlier survey among Hong Kong children aged 36 to 48 months indicated that the prevalence rate of mild, moderate and severe behaviour disorder were at 17.90%, 4.55% and 0.75% respectively (Luk et al., 1991). In a household survey conducted by Tang (1999) involving 1662 interviews of parents with children under 18 years old, the prevalence of internalizing and externalizing behaviours was estimated to be 10.3% and 18.9% respectively. More recently, in another household survey of parents of 4-year old children, about 10.5% of the children displayed behaviour problems warranting further investigation and their parents were concerned about the behaviour problems (Leung, Leung, Chan, Tso & Ip, 2005).

1.2 The prevalence of child physical abuse in Hong Kong

According to the Social Welfare Department (2007), in the first 3 months of 2007, there were 197 newly reported cases of child abuse. In the household survey conducted by Tang (2006) as mentioned above, the rates of parent-to-child physical aggression and corporal punishment were estimated to be 57.5% and 4.5% respectively. A more recent community survey in Hong Kong conducted by The University of Hong Kong (2005) also revealed that about 45 % (out of a total sample of 2062) of child respondents had ever been physically assaulted by either or both their parents. About 9% of children have ever been severely assaulted. During the 12 months prior to enumeration, about 23 % of children had encountered physical assault by their parents and 4% were severe assault cases. The survey results suggested that physical punishment was fairly common in Hong Kong. There was also the possibility of under-reporting of child abuse cases. However, it should be noted that there is no commonly agreed measurement tool or criteria for ascertaining child abuse.

1.3 The relationship between child behaviour problems and child physical abuse

It is recognized that the relationship between child physical abuse and child behaviour problems is likely to be bi-directional. Parental violence might lead to child behaviour problems which might increase the risk of child physical abuse (Herschell & McNeil, 2005), resulting in a vicious cycle (Webster-Stratton & Taylor, 2001). Other known risk factors for child abuse include low income status, low maternal education, large family size, young maternal age, single-parent household, parental psychiatric disturbances, presence of a stepfather, and poor parent-child relationship (Tang, 1999, Tang & Davis, 1996, The University of Hong Kong, 2005; US Preventive Service Task Force, 2004). Early intervention for families with children with behaviour problems or high risk families is important to prevent child abuse problems.

2 Intervention programmes for families at risk of child abuse

For child abuse prevention programmes, intensive home visiting programme at the prenatal/infancy period by professionals such as the Nurse Family Partnership programme have been found to be effective in preventing child abuse and neglect (Olds et al., 1998). The target clients of the Nurse Family Partnership programme are first time mothers with one or more of the following characteristics, i.e. teenage mothers, single mothers, and low socioeconomic status.

For parents who have abused their children or are worried that they might hurt their children, the Parent-Child Interaction Therapy (PCIT) and the Positive Parenting Programme (Triple P) have been found to be effective in overseas studies. A randomized trial found that physical abuse re-report rate at a median of 850 days follow-up was 19% for PCIT group whereas that for standard community parenting group was 49% (Chaffin et al, 2004). For Triple P, a randomized controlled trial indicated that after Triple P intervention, there were decreases in negative parental attributions for children's misbehaviour, potential for child abuse and unrealistic parental expectations (Sanders et al., 2004). In Hong Kong, the Triple P has been found to be effective in reducing child behaviour problems among Chinese parents who have no history or indications of child abuse (Leung, Sanders, Leung, Mak & Lau, 2003), but its effectiveness with Hong Kong parents at risk of child abuse is still to be determined.

The PCIT is considered one of the best practices in the child abuse field because of its theoretical, clinical and empirical evidence (Kauffman Report, 2004). The conceptual foundation of the PCIT is based on behaviourist principles, principles of play therapy and non-directive therapy, stressing acceptance of children through reflection of their behaviour and emotions during play, and Baumrind's work on different parenting styles (Eyberg, 2004). PCIT is different from other parenting programme in that it facilitates changes in parent-child interaction patterns (and thereby reducing child abuse) through therapist coaching parents behind one-way mirror with ear-plug equipment in vivo situation (Urquiza & McNeil, 1996). The Washington State Legislature reports that for every dollar spent on PCIT, it could achieve US$3.64 benefits and it is among the three investment programmes with highest returns (Washington State Institute for Public Policy, 2004).

3 The service gap of parenting program in Hong Kong

At the time of this study, in Hong Kong, though there are parenting programmes involving parents and children together, there is no programme providing intensive coaching for parents. Intensive coaching is especially essential for difficult and/or high-risk families (e.g. the physically abusive and neglectful parents) in terms of producing improvement and sustaining the improvement for these families (Borrego, Urquiza, Rasmussen & Zebell, 1999). Although some agencies provide weekly educational groups, support groups or anger management groups for parents with difficulties in child management at the knowledge and skill level, there are still families that are less able to benefit from these interventions. These parents claim that the parenting skills taught cannot be applied to their situations or are ineffective in their cases. The PCIT, with its emphasis on "live coaching" to parents through ear plug and one-way mirror, as well as continuous monitoring of individual parents throughout the knowledge and skill acquisition process in weekly treatment sessions, can fill the above service gap in supporting parents who might not benefit from the group programmes described above. In order to fill the service gap and in line with the principles of accountability and evidence-based practice, a pilot trial of PCIT to investigate its effectiveness with Hong Kong Chinese parents was conducted by Tung Wah Group of Hospitals (TWGHs).

4 PCIT development in Hong Kong

TWGHs has conducted three PCIT staff development programmes from April 2004 to June 2005 for over 30 staff members. In February 2004, TWGHs invited PCIT experts from the CAARE Diagnostic and Treatment Centre of the University of California (CAARE Centre), namely Dr Anthony Urquiza and Dr. Nancy Zebell, to organize a 4-day PCIT training for staff from TWGHs Youth and Family section. Since April 2004, a pilot project on PCIT was initiated to work with families with children with behaviour problems at Lui Wing Cheung Children Centre in Tuen Mun. Four social workers and one educational psychologist subsequently translated the training materials for local use. The TWGHs staff workers working on the current PCIT Project have received advanced on-site training at CAARE Centre in February 2005 and are certified competent PCIT therapists. From April 2005 to January 2007, a PCIT research was conducted in cooperation with Dr. Sandra Tsang, Head of Department, Department of Social Work and Social Administration The University of Hong Kong and Dr. Cynthia Leung, Deputy Head, Department of Educational Psychology, Counselling and Learning Needs, The Hong Kong Institute of Education. In June 2005, TWGHs has invited Dr. Sheila Eyberg, the founder of PCIT, Dr. Anthony Urquiza, the Director of CAARE Centre, Department of Paediatrics, UC Davis Medical Centre, Dr. Sandra Tsang and other local professionals as speakers in the Symposium on New Initiatives of Child Abuse Prevention. They also offered PCIT training and workshop for TWGHs internal staff and external practitioners.

5 Cultural issues

Though PCIT has been found to be effective in western societies, there is no information on its effectiveness with Chinese parents. There are possible cultural differences between Chinese parents and parents in western societies which need to be considered in the implementation of the PCIT in Chinese societies.

Asians, including Chinese from societies such as China, Taiwan, Hong Kong and Singapore have been found to endorse parental control and authority, interdependence among family members, a sense of duty and honour to the family, hierarchy and respect for authority (Lee & Rong, 1988; Schneider, Hieshima, Lee & Plank, 1994; Bond, 1996; Blair and Qian, 1998). In terms of parenting style and socialization, the concept of filial piety has been prominent among Chinese families for centuries (Ho, 1996). This concept involves prescription of children' s behaviour towards their parents, justification of absolute parental authority over children, and emphasis on responsibility and duty of the child towards the parents. Though research has shown that traditional filial piety attitudes are declining and the authority relations between parents and children are changing (Ho, 1996), the basic ideology of filial piety, in the sense of parents expecting compliance from their children, especially when their children are still young, is still evident among Chinese parents in Taiwan, Shanghai and Singapore, as well as Chinese parents who have migrated to western countries (Wu, 1996).

The above mentioned cultural issues suggest that PCIT may be acceptable by Chinese parents in some aspects, but there might be cultural problems with some other aspects. On the one hand, with the emphasis on respect for authority in Chinese culture, it is likely that Chinese parents may find the direct coaching in PCIT acceptable, if they regard the therapists as authority figures. On the other hand, given the emphasis on parental authority over children, some parents may find it hard to subscribe to the PCIT principles of valuing parent-child relationship over parental authority and control over children, as well as praising and showing affection to their children, instead of only expecting their children to follow parental instructions. Chinese fathers are known to be reluctant in participating in parent education or even family life education programmes, and a mother well-versed with PCIT attitude and skills might not be appreciated by her spouse. The situation could be even more trying for extended cross-generation families when even the child's mother is just a wife and daughter-in-law with relatively less say in a traditional Chinese family. Whoever subscribes to the PCIT approach in parenting will need to acquire the necessary social skills to introduce and sustain the PCIT tactics in the family.

6 Aim of the present study and research questions

The aim of the present study was to evaluate the effectiveness of the PCIT among Hong Kong Chinese parents. Both outcome and process evaluation were conducted. For process evaluation, the focus was on the examination of issues conducive to the implementation of the PCIT among Hong Kong Chinese parents. For outcome evaluation, there were four research questions:

- Was the PCIT effective in reducing child behaviour problems?
- Was the PCIT effective in reducing parenting stress?
- Was the PCIT effective in reducing inappropriate parenting practices?
- Was the PCIT effective in increasing positive parenting practices?

Chapter 2: Methodology

The evaluation included both outcome and process aspects. For outcome evaluation, quasi-experimental design was used. The post-intervention child and parent measures of the intervention group (PCIT participants) were compared with that of a comparison group (*n*o treatment offered), after adjusting for the pre-intervention scores and other demographic characteristics as necessary. For process evaluation, qualitative information was collected through focus group discussions with participants and PCIT therapists, supplemented by the PCIT therapists' own reflection notes.

1 Outcome evaluation

1.1 Participants

1.1.1 Intervention group

The potential participants were parents who indicated concern about their children's behaviour or were referred by Integrated Family Services Centres (IFSCs), Family and Child Protective Service Units (FCPSUs), pre-primary institutions, primary schools and health services etc. The potential participants were assessed by PCIT therapists before joining the programme. They were invited to join the programme if they could meet the inclusion and exclusion criteria (UC Davis CAARE Center, 2004). There were 53 parent-child dyads in the intervention group. The inclusion and exclusion criteria are shown in Table 1.

Table 1
Inclusion and Exclusion Criteria

Inclusion criteria	
Age	The child is between 2 to 8 years old.
Placement	The child resides with the caregiver that will receive PCIT services, or The child will reside with the caregiver that will receive PCIT services within six weeks of initiating treatment and the caregiver has liberal visitation to practice the skills until reunification occurs.
Behaviours	The child is exhibiting difficult to manage behaviours according to the referring agent (i.e. school authorities, social worker, self-referred parent, paediatrician, therapist, etc.).
Measurements*	Results of the Eyberg Child Behaviour Inventory (ECBI) indicate elevated scores on the Intensity scale (131) and/or Problem scale (15). and/or Results of the Parenting Stress Index (PSI) yield a score above 85% in any of the subscales, Parental Distress, Dysfunctional Parent-Child Interaction, or Difficult Child.
Behavioural Observation*	Results of the 15 Minute Behavioural Observation based on the Dyadic Parent-Child Interaction Coding System (DPICS) indicate that the parent is having difficulty managing the child's behaviours.

Exclusion criteria	
Child	Child does not meet any of the criteria above (i.e. age, unstable placement, low behavioural problems, etc.)
Clinical Interview	Clinical interview of the caregiver indicates that there are barriers to consistent participation in the therapeutic programme (i.e. medical problems, transportation difficulties, day care arrangements of infants, etc.) Clinical interview of the child indicates that PCIT is contraindicated based on diagnosis (e.g. psychosis, autism, severe intellectual disability/developmental delay, severe developmental disorder, physical limitation to participate in play activities, etc.) Clinical interview of the caregiver indicates that PCIT is contraindicated based on diagnosis (e.g. active chemical dependency, psychosis, severe intellectual disability, personality disorder, severe depression, physical limitation to participate in play activities, etc.) Background history or clinical interview indicates that the child is a victim of sexual abuse and the caregiver is the alleged perpetrator, or if non-offending caregiver, does not support/believe the sexual abuse allegations.

1.1.2 Comparison group participants

The potential participants were referred for parent training by pre-primary educators, and student guidance personnel or social workers in primary schools. They were assessed on the ECBI and PSI and only those who fulfilled the inclusion ECBI and PSI criteria were included. There were 77 comparison group participants. They did not receive any intervention during the study period.

1.2 Measures

Intervention group participants were requested to complete the following questionnaires before PCIT intervention (pre), immediately after PCIT completion (post), and three to six months after completion of treatment (follow-up). Comparison group participants completed the same questionnaires twice, with four to five months interval in between.

- Socio-demographic information – participants were requested to provide socio-demographic information prior to programme completion. The information required included child age, child sex, child schooling, child length of residence in Hong Kong, parent age, parent length of residence in Hong Kong, parent occupation, parent educational attainment, marital status, family type, household income and Comprehensive Social Security Assistance (CSSA) status.

- Eyberg Child Behaviour Inventory (ECBI) (Eyberg & Pincus, 1999) - this parent rating scale contains 36 items on disruptive behaviours (e.g. non-compliance, temper tantrums, aggression, distraction etc.). There are two scales, intensity and problem. For the intensity scale, the participant is requested to indicate the frequency of the behaviours on a 7-point scale. For the problem scale, participants indicate whether the occurrence of the specific behaviour is considered to be problematic (yes = 1, no = 0). The intensity score can range from 36 to 252 and the problem score can range from 0 to 36. The published cut-off scores for the intensity and problem scales are 131 or greater and 15 for greater (Eyberg & Pincus, 1999). The Chinese version of the ECBI has been validated by Leung, Chan, Pang and Cheng (2003), with good reliability (.94 and .93) for both the intensity and problem scales. In their validations study, the mean scores of children referred for psychological services because of behaviour problems were similar to the published cut-off points, suggesting that the published cut-off points could be applicable in the Hong Kong setting.

- Parenting Stress Index (PSI) - the original PSI is developed by Abidin (1990) and consists of both long form and short form. The short form was chosen for this study because it was shorter and the Chinese version has been validated in Hong Kong with an overall reliability of .89 (Lam, 1999). It consists of 36 questions measuring three factors of parenting stress: parental distress (PD) measuring an impaired sense of parental competence and depression, parent-child dysfunctional interaction (PCDI) measuring unsatisfactory parent-child interaction, and difficult child (DC) measuring behavioural characteristics of the child. A total score can be calculated. A higher total score represents a higher level of parenting stress. According to Abidin (1990), scores above the 90th percentile (PSI-PD-36; PSI-PCDI-27; PSI-DC-36; PSI-total-91) are indicative of parenting problems and child behaviour problems.

In addition to the above, the intervention group participants were also requested to complete the following:

- Therapy Attitude Inventory (TAI) (Hembree-Kigin, & McNeil, 1995) - this is a 10-item questionnaire on client satisfaction with the PCIT. Participants rate their satisfaction on a 5-point scale from 1 indicating low satisfaction to 5 indicating high satisfaction.

Furthermore, the intervention group participants were assessed on the Dyadic Parent-Child Interaction Coding System: Abbreviated Version (DPICS-A) on three occasions, before (pre) and after PCIT completion (post), and three to six months after programme completion (follow-up). The DPICS-A is used to assess the quality of parent-child interactions through observations of dyads in the clinical setting. This coding system is established by Robinson and Eyberg (1981) with good inter-rater reliabilities that ranged from .67 to 1.0 *(M*ean = .91) for parent behaviours and .76 to 1.0 *(M*ean = .92) for child behaviours. The validity of the DPICS-A has been demonstrated in various studies. For example, it has correctly classified 100% of normal families and 85% of treatment families (Robinson & Eyberg, 1981).

Six DPICS-A categories were coded for this study. They included questions, criticisms, commands, descriptions, reflections and praises for parents. Questioning and criticism are unlikely to be conducive to positive parent-child relationship and communication. Children may be more reluctant to communicate if the parent questions and criticizes their behaviour frequently. Description and reflection are likely to lead to better communication between parent and children. It demonstrates parents' understanding and support of their children. Praise can be divided into unlabeled/non-specific or labelled/specific verbalization. Traditionally, Chinese parents seldom praise their children's behaviour for fear of spoiling them. However, social learning theory asserts that praise is excellent in reinforcing positive parent-child interaction. Details of definitions of each category are described clearly in the DPICS-A.

1.3 Procedures

The intervention group participants completed the pre-intervention measures prior to their participation in the PCIT programme. Immediately after programme completion, they completed the post-intervention measures, and then they completed the follow-up measures three to six months after programme completion. They were assessed on the DPICS-A by the therapists at the same times when they completed the questionnaires.

The comparison group participants completed the pre-intervention and post-intervention measures with an interval of four to five months. Upon completion of the post-intervention measures, they were offered various parenting programmes according to their needs.

2 Process evaluation

2.1 Participants and procedures

Therapist reflexivity is important in service evaluation (Berger, 2006). The PCIT therapists were requested to participate in a focus group discussion to share their experiences. In addition, they were requested to write their personal reflections according to a guide.

Two focus groups were conducted for 17 intervention group participants to obtain information about their perceptions and experiences of the PCIT (see Appendix I for information about the characteristics of the participants).

All focus groups were facilitated by one of the service evaluation researchers.

2.2 Measures

Parent participant focus group discussion guides and PCIT therapist personal reflection guidelines were developed for the focus group discussions and personal reflection.

For the parent participants, the focus group discussion guide consisted of four questions on (i) source of information about PCIT; (ii) description of PCIT services received; (iii) benefits of PCIT; and (iv) suggestions for improvement.

The PCIT therapists were asked to perform personal reflection on their practice experience of PCIT according to a guideline (on service target, PCIT theoretical basis; service structure, delivery, resources and indigenization) before they attended the focus group. They could provide supplementary reflection notes after the focus group. The reflection guide is in Appendix II. No specific focus group discussion guide was developed for the PCIT focus group discussion. The focus group discussion focused on their personal reflection.

The focus group discussion notes and all personal reflections were shared amongst the PCIT therapists and the service evaluation researchers for verification. The focus group discussion notes and the therapists' reflection notes were content analysed and the major themes were discussed in chapter 4.

3 Treatment

3.1 Treatment Format

After selecting eligible participants, the intervention was rendered according to the PCIT treatment protocol. The whole treatment programme included intake assessment session, relationship enhancement coaching (Child Directed Interaction [CDI]) session, strategies to improve compliance coaching (Parent Directed Interaction [PDI]) session and post-treatment assessment. The course of treatment is shown in Figure 1.

Normally, treatment sessions were conducted once per week and lasted for approximately one hour in length. To ensure treatment fidelity, the therapist followed a treatment manual that provided written outlines in checklist form for each session. (Urquiza, Zebell, McGrath & Porter, 2002)

Each session began with 10 minutes check-in to review the homework and the family situation. Then, the therapist conducted a five minutes' coding through the observation room to assess the parents' mastery of parenting skill *(M*astery criteria: 5 behavioural descriptions; 5 reflections; 15 praises, 8 of which were labelled; and fewer than 3 commands, questions, and criticisms) and recorded the results in the progress chart. Next, the therapist coached the parents the relationship enhancement skills and gave them feedback in the last five minutes of the session. If both parents joined the treatment session, both of them could take turns to practice the skills with their child while the other observed through the one-way mirror. The session outline is shown in Figure 1.

10 minutes	Check-in Reviewing homework, understanding the dyad's interaction in the past week and goal setting for the session.
5 minutes	Coding for the session
30 minutes	Vivo-Coaching
5 minutes	Review progress Focus on reviewing the session's progress (both parent and child) and homework assignment.
10 minutes	Therapist's progress note writing

Figure 1. 60 minutes protocol of PCIT

In the relationship enhancement sessions, parents were taught the concepts and skills of relationship enhancement through modelling, role-playing and instruction. They were given the translated handouts including relationship enhancement skills, 100 ways to praise, "Active Ignore" sheet and toys list. A daily "HomeFun" sheet was provided for them to practice relationship enhancement skill at home with their children for five minutes a day. The length of relationship enhancement sessions depended on the parent's mastery of the skills checked in the weekly progress charts. Once the parent met the mastery criteria, they could proceed to the strategies to improve compliance phase. This was called criteria-based treatment method (Gallagher, 2003). The average length of the whole treatment was 14-20 weeks (Porter et al., 2006). Another one was the time-limited treatment method, which limited the session at seven relationship enhancement and seven strategies to improve compliance sessions. In the present case, the therapist adopted the criteria-based method for it allowed parents to master the skill before advancement to strategies to improve compliance phase. The programme flowchart is shown in Figure 2.

3.2 Treatment Fidelity

Several procedures were adopted to ensure treatment fidelity.

- The PCIT therapists in this research were certified competent PCIT therapists with sufficient training in PCIT.

- All the training materials were translated into Chinese and reviewed by the PCIT therapists.

- Locally validated measures such as ECBI and PSI were used. The TAI was translated into Chinese. Quarterly inter-rater meetings by therapists were held to ensure consistency of interpretation of DPICS-A.

- Therapists were required to follow the checklist for each session as stated in CAARE Centre's manual to minimize deviance from procedure. The administration procedure for each measurement could be found in Appendix III.

- Regular case meetings were held to ensure consistency in handling case, interpreting DPICS-A and adherence to protocol.

- There was ongoing supervision by PCIT experts from CAARE Centre.

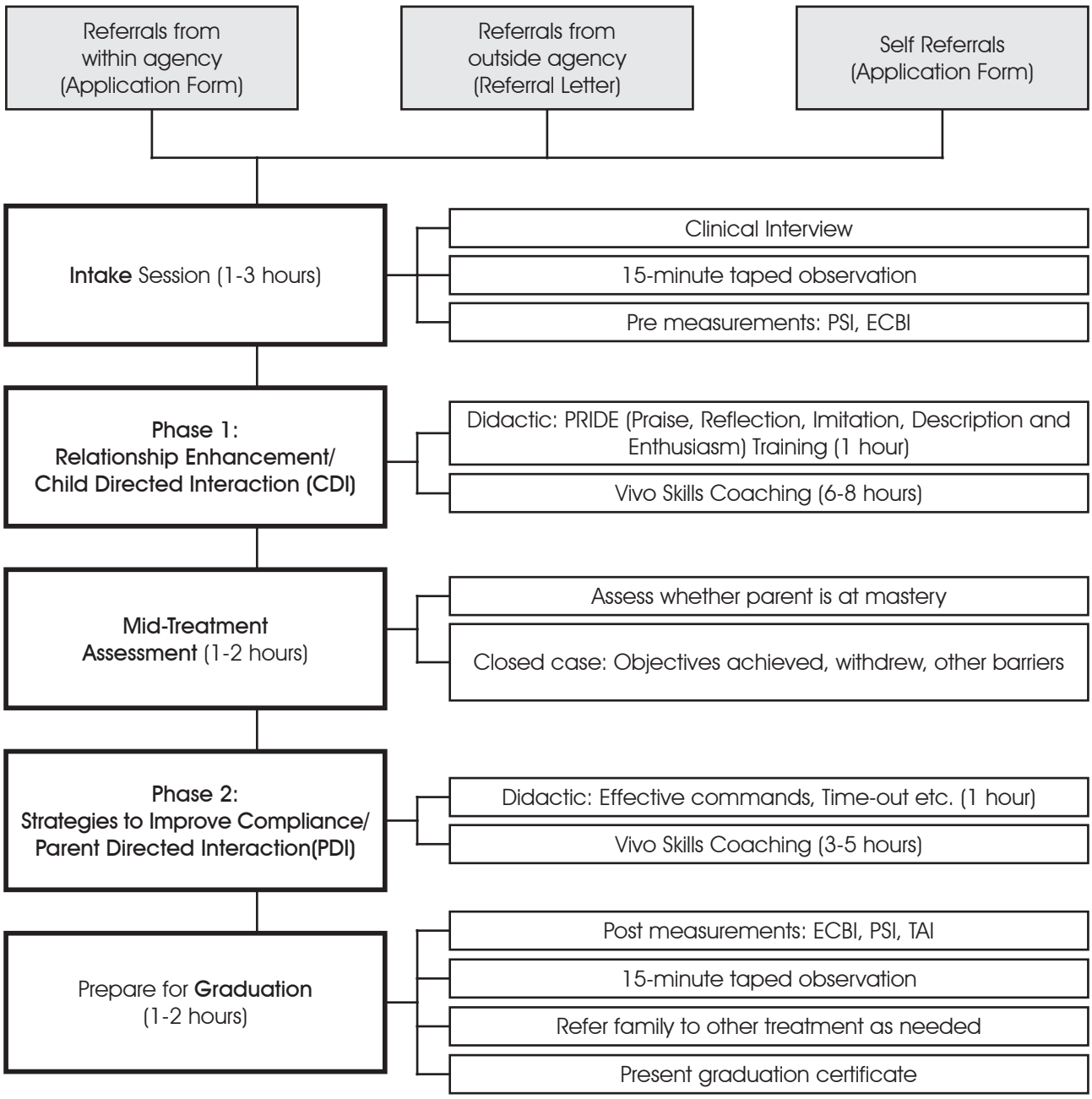

Figure 2. Programme flowchart

Chapter 3: Outcome evaluation results

1 Participants with complete and incomplete data

Among the 130 participants (intervention = 53, control = 77), there were 110 participants with complete data (intervention group = 48, comparison group = 62). Overall, there was no difference between those with complete and incomplete data in pre-intervention child behaviour and parenting stress scores, and other socio-demographic characteristics. When the intervention and comparison groups were analysed separately, among the intervention group members, there was a significant difference between those with complete and incomplete data in terms of pre-intervention PSI PD scores, $t(51) = 2.13$, $p < .05$. Those with incomplete data reported higher pre-intervention PSI PD scores ($M = 58.00$, $SD = 5.70$, $n = 5$) compared to those with complete data ($M = 40.29$, $SD = 7.83$, $n = 48$). There was no difference in other pre-intervention child behaviour and parenting stress scores and other socio-demographic characteristics between those with complete and incomplete data when the two groups were separately analyzed. Among those with incomplete data, there was no difference between the intervention and comparison groups in terms of the socio-demographic characteristics and pre-intervention child behaviour and parenting stress scores.

There were 12 participants (22.6%) from the intervention group who dropped out from the programme. Among them, nine had to drop out because of personal/ health/family problems, moving home and securing employment. There was one participant who dropped out because she was frustrated that she could not meet the mastery criteria. There was one participant who considered that there was no need for service and another case where the child refused to join the programme. Among these 12 participants, seven could be contacted for post-intervention assessment but the rest could not be contacted due to logistic reasons. The comparison group participants with incomplete data were those who could not be contacted due to logistic reasons.

Unless otherwise specified, the analyses reported were based on those 110 participants with complete data. However, the above differences between participants with complete and incomplete data should be taken into consideration in the interpretation of results.

2 Differences between the intervention and comparison group in pre-intervention measures and socio-demographic characteristics

There was no significant difference between the intervention and comparison group participants in most socio-demographic characteristics. However, chi squared test indicated that there was a significant difference between the intervention and comparison group in terms of sex of target child, $\chi^2(1, N = 110) = 4.44$, $p < .05$. There were more female children (33.3%, $n = 16$) in the intervention group than the comparison group (16.1%, $n = 10$). The details are shown in Table 2.

The intervention and comparison group differed in terms of pre-intervention ECBI-intensity, $t(108) = -4.81$, $p < .001$, ECBI-problem, $t(108) = -3.04$, $p < .001$, PSI total, $t(108) = -2.91$, $p < .005$, PSI-PCDI, $t(108) = -2.00$, $p < .05$, and PSI-DC scores, $t(108) = -4.00$, $p < .001$, with the intervention group participants reporting higher scores. The details are in Table 4.

Table 2
Socio-demographic Characteristics of the Intervention and Comparison Group Members

	Intervention group (n = 48)	Control group (n = 62)
Child age	5.48 (1.90)	5.13 (1.65)
Child length of residence in Hong Kong	4.58 (2.22)	4.77 (1.79)
Number of children	1.83 (.81)	1.81 (.70)
Child sex		
Male	32 (66.7%)	52 (83.9%)
Female	16 (33.3%)	10 (16.1%)
Mother age	35.34 (6.16) (n = 47)	34.80 (6.66) (n = 61)
Father age	41.13 (7.14) (n = 45)	40.04 (7.64) (n = 53)
Mother length of residence in Hong Kong	24.14 (15.04) (n = 47)	25.33 (14.45) (n = 61)
Father length of residence in Hong Kong	34.24 (11.65) (n = 45)	35.58 (10.65) (n = 53)
Relationship of participant to child		
Mother	39 (81.3%)	55 (88.7%)
Father	6 (12.5%)	6 (9.7%)
Other female relative	3 (6.3%)	1 (1.6%)
Family type		
Nuclear family	33 (68.8%)	33 (53.2%)
Extended family	6 (12.5%)	16 (25.8%)
Single parent family	6 (12.5%)	10 (16.1%)
Others	3 (6.3%)	3 (4.8%)
Marital status		
Married	42 (87.5%)	48 (77.4%)
Separated/divorced/widowed/unmarried	6 (12.5%)	14 (22.6%)
Mother education		
Lower secondary or below	19 (40.4%)	32 (52.5%)
Upper secondary or above	28 (59.6%)	29 (47.5%)
Father education		
Lower secondary or below	22 (48.9%)	32 (60.4%)
Upper secondary or above	23 (51.1%)	21 (39.6%)
Mother employment		
Employed	12 (25.0%)	24 (38.7%)
Not employed	36 (74.0%)	38 (61.3%)
Father employment		
Employed	41 (85.4%)	59 (95.2%)
Not employed	7 (14.6%)	3 (4.8%)
Household income		
$19,999 or below	34 (72.3%)	50 (80.6%)
$20,000 or above	13 (27.7%)	12 (19.4%)
Social security status		
On social security	15 (31.3%)	11 (17.7%)
Not on social security	33 (68.8%)	51 (82.3%)

3 Reliability estimates

The reliability estimates (Cronbach Alpha) for the scales were above .70 in all except one case (.61). The details are shown in Table 3.

Table 3
Reliability Estimates (Cronbach Alpha)

	Intervention group (n = 48)	Control group (n = 62)	Total (n = 110)
Pre ECBI intensity	.84	.73	.83
Post ECBI intensity	.94	.85	.93
Follow-up ECBI intensity	.92 (n = 34)	NA	NA
Pre ECBI problem	.86	.79	.84
Post ECBI problem	.93	.88	.93
Follow-up ECBI problem	.77 (n = 34)	NA	NA
Pre PSI total	.90	.84	.88
Post PSI total	.95	.87	.94
Follow-up PSI total	.89 (n = 34)	NA	NA
Pre PSI PD	.85	.83	.84
Post PSI PD	.90	.84	.90
Follow-up PSI PD	.87 (n = 34)	NA	NA
Pre PSI PCDI	.80	.61	.72
Post PSI PCDI	.84	.71	.83
Follow-up PSI PCDI	.74 (n = 34)	NA	NA
Pre PSI DC	.79	.72	.78
Post PSI DC	.86	.83	.89
Follow-up PSI DC	.75 (n = 34)	NA	NA

4 The effectiveness of the PCIT programme

The effectiveness of the programme was investigated by using univariate analyses of covariance (ANCOVAs) as the two groups differed in pre-intervention scores and sex of target children. The independent variable was group status. The dependent variables were the post-intervention scores, and the covariates were the respective pre-intervention scores and sex of target children. The scores and effect sizes are shown in Table 4.

For child behaviour, the results indicated significant group difference for post-intervention ECBI intensity, $F(1,106) = 60.90$, $p < .001$. The intervention group participants reported lower scores. The covariate pre-intervention ECBI-intensity and sex of target children were not significant. For ECBI-problem, the results indicated significant group difference for post-intervention ECBI problem, $F(1,106) = 70.55$, $p < .001$, with intervention group participants reporting lower scores. The covariate pre-intervention ECBI-problem was significant, $F(1,106) = 8.89$, $p < .005$, but sex of target children as a covariate was not significant. Using the original cut-off of 131 for intensity and 15 for problem, among the intervention group, McNemar test indicated significant change in status before and after intervention. There were 34 (70.8%) participants in the intervention group whose ECBI-intensity and problem scores were above the cut-off points pre-intervention but were below the cut-off points post-intervention ($p < .001$). For the comparison group, there were only 10 (16.1%) who belonged to this category. McNemar test indicated that the change in status was not significant ($p > .05$) for the comparison group.

For parenting stress, the results indicated significant group difference for post-intervention PSI total scores, $F(1,106) = 71.66$, $p < .001$. Intervention group participants reported lower scores than comparison group participants. The covariate pre-intervention PSI total scores was significant, $F(1,106) = 20.34$, $p < .001$. The covariate sex of target children was not significant. For PSI PD, the results indicated significant group difference for post-intervention PSI PD scores, $F(1,106) = 49.80$, $p < .001$, with intervention group members reporting lower scores. The covariate pre-intervention PSI PD scores was significant, $F(1,106) = 60.97$, $p < .001$. The effect of sex of target children was not significant. For PSI PCDI, the results indicated significant group difference for post-intervention PSI PCDI scores, $F(1,106) = 51.57$, $p < .001$, and intervention group participants reported lower scores. The covariate pre-intervention PSI PCDI scores was significant, $F(1,106) = 18.80$, $p < .001$. Sex of target children as a covariate was not significant. For PSI, DC, the results indicated significant group difference for post-intervention PSI DC scores, $F(1,106) = 51.03$, $p < .001$. Again, intervention group participants reported lower scores. The covariate pre-intervention PSI DC scores was significant, $F(1,106) = 6.58$, $p < .05$. The covariate sex of target children was not significant.

The results consistently indicated that the PCIT was effective in reducing child behaviour problems and parenting stress, as reflected by participants' self-report measures. In terms of effect sizes, according to Cohen (1988), anything larger than 0.5 is considered large. The effect sizes are all above 0.5 in the present case.

To address the problem of attrition, another series of ANCOVAs were performed where the participants with incomplete data were included. Their pre-intervention scores were used as substitutes for the missing post-intervention scores, assuming no change from pre-intervention assessment for these participants with incomplete data (Hutchins et al., 2007). The dependent variables were the post-intervention scores. The covariates were the respective pre-intervention scores, sex of target children and mother employment[1] . The independent variable was group status. The results were consistent with the main analyses including only participants with complete data.

1 When participants with incomplete data were included, there were significant differences between the intervention and comparison group in sex of target child, mother employment and pre-intervention child behaviour and parenting stress scores.

Table 4
Mean and standard Deviation Scores of Child Behaviour Problems and Parenting Stress

	Intervention group (n = 48)		Control group (n = 62)		Effect size	Confidence interval
	Pre	Post	Pre	Post		
ECBI-intensity	164.65 (22.78)	102.21 (26.00)	146.10 (17.65)	140.19 (22.17)	1.59	1.15 to 1.71
ECBI-problem	20.52 (6.87)	4.92 (6.49)	16.85 (5.78)	15.63 (7.47)	1.52	1.08 to 1.43
PSI total	121.60 (17.16)	85.27 (19.91)	112.87 (14.35)	109.08 (14.98)	1.38	0.95 to 1.59
PSI PD	40.29 (7.83)	30.31 (8.10)	38.42 (8.05)	37.92 (7.65)	0.97	0.56 to 0.99
PSI PCDI	36.67 (6.84)	25.75 (6.50)	34.40 (5.04)	32.84 (5.42)	1.20	0.78 to 1.31
PSI DC	44.65 (6.43)	29.21 (7.31)	40.05 (5.60)	38.32 (6.76)	1.30	0.88 to 1.35

Table 5
ECBI cut-off Status Before and After Intervention

	Intervention group (n = 48)		Comparison group (n = 62)	
	Post		Post	
	Below cut-off	Above cut-off	Below cut-off	Above cut-off
Pre				
Below cut-off	12 (25.0%)	0 (0%)	24 (38.7%)	4 (6.5%)
Above cut-off	34 (70.8%)	2 (4.3%)	10 (16.1%)	24 (38.7%)

5 Comparison between pre-intervention, post-intervention and follow-up scores among intervention group participants

Repeated measures ANOVA was used to examine changes in pre-intervention, post-intervention and follow-up scores among intervention group participants with complete data on all assessment points (n = 34). In all cases, the main effects were significant. The post-intervention and follow-up scores were significantly different from the pre-intervention scores. The results are shown in Table 6.

Table 6
Comparison Between Pre-intervention, Post-intervention and Follow-up Scores among Intervention Group Participants (n = 34)

	Pre	Post	Follow-up	Significance
ECBI-intensity	168.62 (22.26)	96.21 (20.02)	96.41 (19.90)	F(2 66) = 218.67, p < .001
ECBI-problem	21.44 (6.75)	2.59 (2.86)	3.32 (3.42)	F(2, 66) = 243.07, p < .001
PSI total	123.24 (11.62)	78.41 (12.54)	80.91 (12.42)	F(2, 66) = 155.50, p < .001
PSI PD	40.74 (8.24)	28.41 (6.53)	28.79 (6.26)	F(2, 66) = 75.24, p < .001
PSI PCDI	36.50 (7.39)	23.41(4.76)	24.65 (4.52)	F(2, 66) = 82.23, p < .001
PSI DC	46.00 (6.20)	26.59 (4.20)	27.47 (4.58)	F(2, 66) = 173.87, p < .001

Note: Drop out cases did not have follow-up scores though some of them were contacted to supply their post-intervention scores

6 Changes in dyadic parent-child interaction (DPICS) measures and corporal punishment

Repeated measures ANOVA was used to examine changes in DPICS-A measures and corporal punishment among intervention group participants with complete data on all assessment points. The DPICS-A measures included child compliance (child compliance divided by total number of commands given), questions, criticisms, commands, descriptions, reflections and praises for parents. In all cases, the main effects were significant. The post-intervention and follow-up scores were significantly different from the pre-intervention scores. There were decreases in questions, criticisms and use of corporal punishment and increases in descriptions, reflections, praises and compliance. The details are in Table 7.

The average number of sessions attended was 17.14 sessions (Minimum: 5, maximum: 29) (including CDI and PDI and assessment).

Table 7
Changes in DPICS-A Measures and Corporal Punishment among Intervention Group Participants (n = 34)

	Pre	Post	Follow-up	Significance
Praise	1.38 (3.32)	16.62 (4.08)	16.71 (1.82)	$F(2, 66) = 264.02$, $p < .001$
Descriptive and reflection statements	14.71 (8.70)	27.82 (6.11)	28.85 (4.89)	$F(2, 66) = 43.76$, $p < .001$
Criticisms, commands and questions	25.82 (12.05)	0.88 (1.07)	1.29 (1.34)	$F(2, 66) = 143.88$, $p < .001$
Child compliance	0.60 (0.36)	0.97 (0.07)	0.96 (0.09)	$F(2, 66) = 30.86$, $p < .001$
Number of corporal punishment	11.38 (13.19)	0 (0)	0.09 (0.51)	$F(2, 66) = 25.07$, $p < .001$

Note: Drop out cases did not have follow-up scores though some of them were contacted to supply their post-intervention scores

7. Client satisfaction

Client satisfaction was measured using the TAI. The majority of the clients indicated high satisfaction with the programme. The details are in Table 8.

Table 8
TAI Scores ($n = 43$)

		Low satisfaction			High satisfaction	
		1	2	3	4	5
1.	Techniques of discipline	0 (0%)	1 (2.3%)	5 (11.6%)	15 (34.9%)	22 (51.2%)
2.	Techniques for teaching my child new skills	0 (0%)	1 (2.3%)	10 (23.3%)	14 (32.6%)	18 (41.9%)
3.	Relationship between myself and my child	0 (0%)	0 (0%)	1 (2.3%)	16 (37.2%)	26 (60.5%)
4.	My confidence in my ability to discipline my child	0 (0%)	0 (0%)	1 (2.3%)	27 (62.8%)	15 (34.9%)
5.	Major behaviour problem that my child presented at home before the programme started at this time	0 (0%)	0 (0%)	1 (2.3%)	12 (27.9%)	30 (69.8%)
6.	My child's compliance to my commands or requests at this time	0 (0%)	0 (0%)	0 (0%)	20 (46.5%)	23 (53.5%)
7.	The progress my child has made in his/her general behaviour	0 (0%)	0 (0%)	0 (0%)	29 (67.4%)	14 (32.6%)
8.	Degree to which the programme has helped with other general or personal family problems	1 (2.3%)	1 (2.3%)	2 (4.7%)	17 (39.5%)	22 (51.2%)
9.	The type of programme that was used to help me improve the behaviour of my child	0 (0%)	0 (0%)	3 (7.0%)	18 (41.9%)	22 (51.2%)
10.	My general feeling about the programme that I participated in	0 (0%)	0 (0%)	0 (0%)	9 (20.9%)	34 (79.1%)

Chapter 4: Process evaluation results

In this chapter, the perceptions and experiences of the parent participants and PCIT therapists in relation to the PCIT would be discussed. The information was based on focus group discussions, therapist reflections, service records and informal discussion with therapists. The discussion will be presented in the following three sections.

1 Useful aspects of the programme

1.1 Change in parent-child relationship

Many parent participants explained that after participation in the programme, they were able to see their children's strengths and they reported better relationship with their children. Parent participants were also able to see the part they played in the parent-child relationship and were more ready to initiate efforts for improvement. The following are some examples:

> 知道是自己問題，該反省…反省自己是最大問題，再重新再來。 學會不狂打仔, 重建親子關係。 (T6)
> I realized the problem was with me. I needed to self-reflect. ……The reflection revealed that I was the biggest problem, and I needed to begin afresh. I learnt not to use physical punishment on my child, and to repair the parent – child relationship. (T6)

> 不是孩子太曳，是我自己太緊張。 (M10)
> It was not because my child was too naughty. Only that I was too nervous.(M10)

> 原來孩子有很多情緒，對外間壓力有反應，改善效力不會持久。若沒有PCIT則不知道問題所在, 也不懂如何改善, 也不懂技巧如何運用。 （T7）
> Actually children harbour a lot of emotions, and are affected by external pressures. The improvement effect does not last long. I would not have known about the real problem without going through PCIT. I would not be able to improve, and I would have no skills to use. (T7)

> 我講sorry對唔住快左。(M8)
> I will say "sorry" more promptly than before (M8)

> 親子互動，改善了關係。 (M2)
> Interaction between parent and children improve our relationship. (M2)

> 學會了解孩子那時那刻要甚麼，不是遷就和縱容孩子，是合作、配合。 (T2)
> I learnt to first find out what the child needed at that moment, not to spoil or indulge on the child, but to cooperate and work together with the child. (T2)

The parent participant's experiences were consistent with the goal of PCIT, which focused on building on the parents' responsibilities to restructure their dysfunctional parent-child interaction patterns (like blaming and scolding from the parent and negative attention seeking and non-compliance from the child) into adaptive and enjoyable interactions for both parties. This re-structuring was achieved through the active coaching of the PCIT therapists.

1.2 Intense support and home work practice

The parent participants were very positive about the individual coaching and support of the PCIT therapists. They also thought that the home activities were very important, especially the 5-minute play-time at home, which both parents and children enjoyed.

> PCIT類似我以前參加過的一個課程，但PCIT單對單，更有效。 (T6)
> PCIT is similar to another programme I attended before, but PCIT uses a case-based approach, and is even more effective. (T6)
>
> 每日定時定候，兒子會提醒我做親子遊戲時間。 (M4)
> At fixed times of the day, my child would remind me to have the parent-child play time with him (M4)
>
> 成功在於家長可以實踐，個個星期做，每日做。 (M2)
> The success of PCIT is attributable to the parents' willingness to practice every week, every day. (M2)

The parent participants' comments suggested that the individual-based programme format and intensity of the PCIT were appropriate for their needs. The homework assignments were useful in reinforcing the skills and the 5-minute play-time at home was a powerful daily prescription to foster parent-child relationship.

1.3 Client-centred and empowerment approach

The parent participants also pointed out more specific aspects of the PCIT that they liked. Participants maintained that the PCIT therapists were able to respond to their own needs, rather than delivering a standard programme. They felt that they had benefited much from PCIT and were prepared to introduce the programme to others. Some of the participants explained their views as follows:

> PCIT針對自己的孩子或自己的問題，不是一套普及課程。 (M4)
> PCIT seeks to address specifically the problems of my child or myself. It is not a general programme. (M4).
>
> 姑娘好好人，會明白關心。 (M4, T2)
> The therapist is very nice, understanding and caring. (M4, T2)
>
> 我從PCIT得到這麼多，我樂意面對記者推介PCIT。（M7, T3, T5, T6）
> I have learnt so much through PCIT. I am willing to meet the media to promote PCIT.（M7, T3, T5, T6）

The parents' experience echoed the client-centred approach and empowerment principle inherent in the PCIT assumptions. While adhering to structured formats and session protocols to ensure intervention quality, the PCIT therapist respected the parent and even the child as independent individuals with their own characteristics and concerns. The PCIT therapists had to develop their actual intervention, including the choice of toys and parent-child interaction scenario, according to the latest issues as reported by the parent.

1.4 Educational approach

Another aspect that the participants found useful was the educational approach adopted. The goal of intervention anchors on mastery of strategies and skills to improve interaction patterns and relationship. Setting up PCIT as training sessions, the PCIT therapists assumed very active and directive roles, coached the parent behind a one-way mirror, and modelled adaptive interaction patterns to the parent-child dyad. These were well-received by Chinese parents. Below are some examples of parents' experiences:

> 姑娘在另一房間的單面鏡觀察，即時教點講，我可以實踐。 (M7)
> The therapist observed me through the one-way mirror. She gave on-the-spot instructions to me on what to say to the child. I could put that into practice. (M7)

> 我態度及說話不對時，姑娘即時糾正，即時有效。 (T1)
> When I displayed wrong attitudes or said wrong things, the therapist would correct me right away. This produced immediate effect. (T1)

> 單對單，一錯便糾正，印象深刻好多。 (T2)
> One-on-one and immediate correction of my mistakes created a much deeper impression. (T2)

> 有完整筆記方便重溫 (M7)，筆記是天書。(M1)
> The handouts were very complete and facilitated revision (M7); the notes were perfect reference materials. (M1)

1.5 Effective behaviour management skills

The parent participants also expressed appreciation for PCIT's explicit focus and direct intervention on parent and child behaviour. They found immediate improvement on the parent-child interaction when they followed the worker's instruction, or modelled after the worker's behaviour. The improvement was gratifying to both parties and served as intrinsic reinforcement for them to repeat the functional behaviour. They explained their success as follows:

> 我講「1-2-3」，孩子真的會停。 (M3)
> When I said "one-two-three", my child really stopped. (M3)

> 我覺得自己比其他家長懂得讚賞孩子。男家有五兄弟，女家有四兄弟，沒有一個有我的技巧（當家長）。(T3)
> I think I am more competent than other parents in praising children. My husband has five brothers, and I have four brothers, but none of them have the skills I have (as a parent). (T3)

> 教了一些有用的技巧幫助管教，例如積極不理會法及暫停椅。（T4）
> I was taught some useful skills to help me manage my child. They included "Active Ignore" and time out chair. (T4).

在家中正面欣賞孩子，給多些機會，弄好些關係，孩子會減少對抗。 (M2)
At home, if I can positively appreciate my child, give him more chances, improve our relationship, my child will be less resistive. (M2)

1.6 Child-centred play

Apart from the skills taught, the parent participants liked the play element in the PCIT programme and found it useful. Play is an important element in PCIT. After reviewing case progress at the beginning of each session, the PCIT therapist set up a play scenario to allow the child, accompanied by the parent under the therapist' s coaching, to work through recent challenges in the child-centred play. The parent participants described their views as follows:

姑娘教我用甚麼方法表示反應(T4), 不會太負面刺激孩子。 (T2)
The therapists taught me how to react (T4) so as not to provoke my child negatively. (T2)

學懂如何與孩子玩，讓孩子發洩和發揮。 (T6)
I learnt how to play with my child, let him express and develop. (T6)

學懂如何與孩子玩固定遊戲, 達到一些目的(改善)。(T6）
I learnt how to play some designated games with my child to achieve certain goals (for improvement). (T6)

1.7 Positive focus

Furthermore, the parent participants maintained that PCIT therapists could help them look at positive aspects. One parent participant explained her view as follows:

姑娘教我用正面欣賞的角度，看好的一方面，多欣賞支持。 (M7)
The therapist taught me how to assume a positive appreciation angle, to view from the positive side, and show more appreciation and support. (M7)

PCIT is set up for building up adaptive dyadic interaction patterns to enhance parent-child relationship. Even when the dyads were challenged by life events (like poor school performance, complaints by teachers, or family crises) that distracted or offset the intervention effectiveness, the workers would still try to steer the parent participants towards solutions rather than indulging in reporting problems and difficulties. Such deliberate focus could often switch the parents' mindset from negative to positive, and empower them to generate hope, count their blessings, utilize their resources and develop ways out.

1.8 Early intervention

Besides, the parent participants also pointed out that it was important that they started PCIT when their children were young. Their comments supported the theoretical approach of PCIT in terms of its emphasis on early intervention. It is thought that parents with young children are themselves younger and more open to improve their parenting skills. PCIT aims to engage parents and children at the strategic timing for early remediation of dysfunctional practices and prevention of subsequent parent-child problems. Below are some examples of parents' comments:

> 孩子越小參加PCIT越好。 (T4)
> Children should join PCIT as young as possible. (T4)

> 5歲才學太遲。 (T3)
> It is too late to begin by 5. (T3)

1.9 Staff quality

Last but not the least, the parent participants were very positive about the professional attitudes of the PCIT therapists. The parents reported that the children liked the therapists very much. Below are some examples of their comments

> 孩子很喜歡X姑娘，常常提醒我要記得告訴X姑娘他變乖了。 (M5)
> My child is very fond of therapist X, and often reminds me to tell her that he has improved. (M5)

> Y姑娘好關心人。 (T2)
> Therapist Y is very caring. (T2)

In this study, all PCIT therapists had degree level professional training in social work, and some even had post-graduate qualifications in social service research and practice. Their training enabled them to adhere closely to the practice and research requirements in this study so that very positive results could be produced.

2 Issues in the application of PCIT

2.1 Achievement of mastery criteria

2.1.1 Skills mastery criteria

There were variations in the achievement of skill mastery criteria by the parent participants. The easiest one was descriptions and reflections, then questions, criticisms, indirect and direct commands, and finally, praise. As shown by the DPICS-A figures in chapter 3, participants praised infrequently during the pre-intervention assessment and many participants found it difficult to praise their own children. These difficulties were consistent with the cultural issues discussed in chapter 1. PCIT therapists tried to empathize with the participants, acknowledged the reluctance and discussed the importance of praise for improving young children's behaviour and self-esteem. They also suggested more subtle forms of praise, such as pleasant facial expressions and indirect praises (e.g. "Your grandmother would like that picture.") (Hembree-Kigin & McNeil, 1995).

Other measures included providing localized praise guidelines for participants to follow (e.g. 你玩得咁靜，好乖呀！It is nice that you are playing so quietly/ attentively), providing feedback to participants on their successful use of praise, making participants aware of the change in their children's behaviour contingent on the use of praise, and PCIT therapist as model. For example, one PCIT therapist explained how she modelled and demonstrated praise in her therapist –client relationship:

> Sometimes there were parents who were experiencing more difficulties. They would easily give-up when they saw little change in the child. I usually pointed out that they had done a tremendous job by not being angry at the situation, whereas before treatment they would have told off their child severely because of their frustration. I also pointed out very small improvement in the parent-child relationship. They then learned from me to appreciate very small changes in themselves as well as in their children.

Apart from the above, there were other difficulties faced by the participants which made achievement of skill mastery criteria difficult, for example, insufficient toy varieties, parents' personal stressful life events, parents health condition, parents' emotions and failure to complete homework.

2.1.2 Measurement criteria

PCIT therapists were concerned that it was difficult for some parents to achieve the measurement success criteria because of their personal situations. One of the therapists reported the following incident:

> I happened to have worked with a dedicated father, who tried hard in acquiring PCIT skills, and mastered CDI and PDI criteria at the end of treatment. He decided to terminate treatment because his child was much more obedient and he felt competent in parenting. Measurement results showed that he dropped out of clinical range in the first two domains of PSI but had high scoring in "Difficult child" and ECBI items related to siblings. I explored and found that this father had a teenage daughter who was causing the sibling problems and was the reasons for the high score in the two instruments. In this case, the father was very disappointed to be regarded as a failure in treatment even when he had mastered PCIT skills and reported great satisfaction in treatment.

The problem with PSI was further hampered by the fact that there was no local norm for establishing cut-off points. It was not clear whether the original cut-off scores proposed by Abidin could be applicable to Hong Kong Chinese parents. Below are some comments from therapists and parent participants:

> It (PSI) is too long for the parents and the parents in Hong Kong tend to have higher scores. It is better to use other measurement instruments to replace it.

> 最不滿意要通過標準，才算成功！我的技巧有了，但情緒不好表現不好便定為失敗，就不好。計劃考慮不周，要調節成功水平！（T6）
> I am most dissatisfied with having to pass certain standards before I can be counted as a success case. I have mastered the skills, but may not be able to perform well if my mood is not good. If I am then counted as a failure, it is not good. The plan does not take everything into consideration and the success criteria should be adjusted. (T6)

2.2 Completion of 5-minute homework

Not all participants were able to complete the required homework. There were many different reasons including environmental factors like household chores and shortage of toys; personal factors like stress at work, personal study, physical health, time management, and disagreement about the function of homework; relationship factors like marital discord, lack of support from other family members and in-law relationship problems; and the child factor, like the child's performance on a certain day and child's homework.

2.3 Treatment length and number of sessions

In western societies, the treatment ranged normally from 14 to 20 sessions. Similar pattern was noted in Hong Kong, but some participants with more personal and family difficulties might require more than 20 sessions. They needed extra support to help them deal with their difficulties in various areas and their personal issues may affect the process of meeting skill mastery criteria. However, such investment on individual cases might discourage the widespread use of PCIT.

2.4 Worker's role when parents have personal or family difficulties

Some parents encountered parenting problems as well as personal difficulties such as depression, marital conflict, debts, and new arrival adjustment difficulties. They appreciated the positive and empowering support by the workers and faithfully engaged in the service to resolve parent-child as well as personal problems. One participant described her experience as follows:

> 孩子問我遇到這問題，為甚麼不找X姑娘。(T3)
> My child asked why I did not consult Therapist X when I encountered certain problems. (T3)

These cases not only drained additional input from the worker but also diffused the worker's role, and turned the worker into a counsellor in addition to a PCIT therapist. The PCIT therapist tried to adhere to the primary educator role and use solution-focused approach to briefly handle the parents' personal problems. Should this prove inadequate, referral for proper counselling should be made so that the PCIT intervention is not contaminated. Two of the PCIT therapists reflected on their experience as follows:

> Sometimes, I was like a "second mother" to parents who were victims of domestic violence. Empathic understanding to sufferings and low self-esteem, as well as a clear position on "zero-tolerance" was crucial in dealing with these parents.
>
> I tried to make use of knowledge of client's special need and incorporated this with PCIT skills in coaching.

2.5 Manpower and resource

The PCIT one-on-one multiple session (ranging from 5 to 29) input by very well-qualified professionals is a very resource-demanding approach if the service is supported by public funds in government or non-government organizations. The approach needs further research support to gain due recognition of its contribution to early intervention and prevention of child abuse and family disharmony before it can attract enough commitment from public funds to be extensively implemented in different districts of Hong Kong. There must be further evidence to demonstrate that early investment on PCIT is cost-efficient and can save future investment on intensive family counselling or even remedial work on youth at risk in the Hong Kong context.

3 Cultural issues

There were some cultural issues related to the use of PCIT in Chinese societies.

3.1 Extended family members

Extended family members might complain about the participants' child management techniques.

These issues were consistent with some of the potential cultural problems discussed in chapter 1. Parent participants faced difficulties in convincing their spouses and other family members to share their views. Some tried to ask their significant others to join PCIT, but resource constraints did not allow such additional privileges to individual cases. Faithful graduates might struggle with other family members and created new family crises because of their different views on PCIT. One of the therapists explained the situation as follows:

In Chinese families, we need to understand child behaviour problems not only in a parent-child context though it is the most powerful influence, but also grandparent or other relatives' interaction in the extended family. I have three cases where mothers always complained that they could manage their children's behaviour well after attending PCIT but it was unstable because other relatives and grandparent did not share the same concepts and principles with them. That's why some parents always complained that they could not apply PCIT skills at home. Thus, I needed to invite the relatives or grandparents to attend the coaching sessions or make home visits to the family.

On the other hand, some participants eventually managed to gain the support of their family members. They reported their experiences as follows:

> 家人支持很重要。PCIT令家人明白孩子多了，故接納轉校的決定，使兒子情況好轉，成績也好了點(小兒子有嚴重讀寫障礙，大兒子是資優生)，家庭生活開心了。 (T7)
> Support from family members is very important. PCIT enables the family to better understand the child, accept the decision to change school. My son's condition improved and the results also slightly improved (this younger son has severe dyslexia while the elder son is gifted). My family life becomes happier. (T7)

> 以前孩子的祖母怕 (PCIT的方法) 會縱容孩子控制家長，現在祖母也覺得孩子有改善，也想學PCIT來湊孫 (T2)
> At the beginning, my child's grandmother was worried that (the PCIT methods) would spoil my child so the child would manipulate the parents. Now she noticed some positive changes in the child and also wanted to learn PCIT to help her manage my child. (T2)

3.2 Using the "Active Ignore" technique

Some participants found the technique "Active Ignore" difficult, especially in relation to using this technique with their children's misbehaviour in public. In Chinese culture, the child's misbehaviour was thought to reflect the parent' s inadequacy in disciplining his/her child. To avoid the public display of their "inadequacy", parents tried to end the behaviour as quickly as possible and they might use methods such as criticism, physical punishment or force. PCIT therapists tried to use the here-and-now situation to demonstrate the use of "Active Ignore". Below is a typical example:

> When the child interrupted my conversation with the mother in the "checking time" (the first 10 minutes in the protocol), I demonstrated "Active Ignore" by looking at the mother' s eyes and focusing on the checking. I also gave "selective attention" to the child when he closed his mouth and sat quietly waiting for his turn.
>
> It should be pointed out the parent participants who completed the PCIT were able to overcome the "fear of inadequacy" and were more capable of using "Active Ignore".

3.3 Using praise

As mentioned earlier, some participants thought that praise might spoil their children and they felt that there was no need to verbalize the praise. They also thought that the child "should" perform well and be respectful toward parents. Furthermore, some participants had a tendency to lead and control the child during play situation. These issues might stem from traditional Chinese values such as parental authority, parental control and overprotection (Blair & Qian, 1998; Ho, 1996). Possible solutions have been discussed in section 2.1.1 of this chapter.

Chapter 5: Discussion

1 The effectiveness of PCIT in this study

In terms of the first research question on the effectiveness of the PCIT in reducing child behaviour problems, the quantitative results indicated that PCIT was effective in reducing child behaviour problems. There was a significant difference in post-intervention child behaviour problem scores between the intervention and comparison group, with the former reporting lower scores. There was a significant decrease in number of intervention group participants being above the ECBI cut-off points at post-intervention, compared to pre-intervention.

For the second research question on the effectiveness of the PCIT in reducing parenting stress, the results indicated that PCIT was effective in reducing parenting stress. There was a significant difference in post-intervention parenting stress scores between the intervention and comparison group, with the former reporting lower scores. As for percentage below cut-off points, in the Hong Kong situation, there was no local norm for establishing cut-off scores, and there were concerns about using cut-off scores established in the west among the Hong Kong population (Leung et al., 2005).

With regard to the third research question on the effectiveness of the PCIT in reducing inappropriate parenting practices, the results indicated significant decrease in use of criticisms, commands, questions and corporal punishment at post-intervention. For the fourth research question on positive parenting practices, there were significant increases in use of praise, descriptive and reflective statements at post-intervention.

The qualitative data was consistent with the quantitative data. Parent participants reported positive changes in parent-child relationship and children's behaviour. They reported more positive attitudes towards their children and found the PCIT programme content, format and therapists very helpful.

The above echoed the various PCIT outcomes reported by Professor Sheila Eyberg in her 2005 presentation in Hong Kong. The outcomes included strong skills acquisition, more positive attitude towards the child, reduction of behaviour problems, and high

2 Factors contributing to the effectiveness of the PCIT

According to Eyberg (2004), PCIT is an assessment-driven (regular coding, intake, mid and termination assessments), competence based (parent must achieve skill mastery criteria before termination), maintenance insurance treatment which expected changes to last for one to three years. Examination of the process issues in the current application in Hong Kong in chapter 4 suggests some factors conducive to the initial success. The intense and professional therapist support with one-to-one coaching on-the-spot and regular homework were some of the key factors mentioned by the parent participants. The trainer-trainee relationship was well accepted by the parents as it also fitted into the Chinese culture of paying respect to authority who commanded expertise beyond oneself. Feeling secure and respectful, the participating parents were thus non-resistant to training and even compliant to in-session and homework practices. The programme delivery approach, with its client-centred, empowerment and educational approach made the participating parents feel respected, empowered and very positive during and after the intervention. In terms of the programme content, parent participants found the child management techniques, the play element and the emphasis on a positive focus useful and enjoyable and these served to reinforce the parent participants' confidence in using PCIT. Furthermore, the programme goal with its emphasis on the re-structuring of the parent-child relationship made it a positive and non-stigmatizing experience for parents. A few parents were significantly empowered and volunteered to be advocates for PCIT, to be peer counsellors to new PCIT participants, to be role models in PCIT social functions to mingle with new trainees to facilitate their learning, and to help out with building PCIT resources.

3 Cultural issues and suggestions for further improvement

Several cultural issues were identified in the process evaluation. Some of the possible solutions are as follows:

3.1 Use of praise and "Active Ignore"

PCIT therapists have derived various solutions during the process, including localized praise guidelines for participants to follow, providing feedback to participants on their successful use of praise, making participants aware of the change in their children's behaviour contingent on the use of praise, and PCIT therapist as model. It is expected that similar cultural adaptations in teaching aids and even modes of service delivery will emerge with extended experience in cross-cultural application of the PCIT. These cultural adaptations could continue to be put to rigorous evaluation research and their effectiveness be further investigated.

3.2 Support of extended family members

It is proposed that more talks or parent sharing groups or family clubs should be established so that the family members who could not join PCIT training can get some exposure of PCIT through sharing from other families, or through witnessing improved children behaviour across different settings and social occasions.

3.3. Collaboration with teachers

Teachers are found to be another important group, aside from extended family members, that needs more orientation on the PCIT basic premises to promote improved adult-child relationship to foster more adaptive behaviour from the child. Sharing of PCIT principles and techniques with teachers could be conducive to enhancing home-school co-operation in supporting children.

There were some limitations in this study. First, this was not a randomized controlled trial study. There were ethical concerns about the use of a waiting-list group as comparison group because delaying services for families with severe behaviour problems might increase the possible risk of child abuse. The comparison group participants were recruited separately from the intervention group and their pre-intervention child behaviour problem and parenting stress scores were lower than the intervention group. Though the pre-intervention scores were used as covariates in the statistical analysis, this point should be taken into consideration in the interpretation of the findings. Second, some participants from the intervention group did not complete the intervention. This might be related to their perceived usefulness of the PCIT. However, including them in the analysis and using their pre-intervention scores to substitute for the missing post-intervention scores yielded the same pattern of results. Third, follow-up scores for DPICS-A, ECBI and PSI were only available for 34 intervention group participants. Those who dropped out could not be contacted for the follow-up assessment. This should be taken into consideration in the interpretation of the results. Fourth, it was not possible to use the PSI cut-off scores in evaluating the effectiveness of PCIT in reducing parenting stress. As mentioned, there was no local norm for cut-off and from other local studies (e.g. Lam, 1999; Leung et al., 2005), it was evident that a fair percentage of Hong Kong Chinese parents had PSI scores above the 90th percentile (cut-off point) according to the original norms. Local norms for PSI cut-off need to be established. Fifth, there were very few fathers and all PCIT therapists were females. Sixth, the present study only obtained outcome measures from the parent participants, but not from the children or other family members. Finally, the participants of this study were limited to parents of children with conduct and related problems. Future studies should extend the sample and examine the usefulness of the PCIT on more types of children with challenged behaviours.

Overall, the results of this pioneer evaluation study suggest that PCIT is effective in reducing child behaviour problems, parenting stress, inappropriate child management strategies and increasing positive parenting practices among Chinese parents in Hong Kong. Extra support is needed in encouraging parents to use "Praise" and "Active Ignore" techniques rather than the conventional disciplinary measures to force children into compliance. Strategies to elicit support from extended families are also needed to facilitate consistent practice of PCIT principles in these families.

Given such encouraging evidence on the effectiveness of PCIT with Chinese families, the research team recommends that:

1. More rigorous research be conducted to demonstrate the usefulness of PCIT across different settings and on different types of children with challenging behaviours. PCIT should be tested against other intervention approaches to demonstrate their respective strengths and limitations, and in what ways intervention effectiveness can be achieved most cost-effectively.

2. More active efforts be made to promote PCIT to the public, especially the education and social service sectors so that teachers and social service personnel can be more ready in case detection and referral for PCIT services.

3. Formal channels of collaboration be established between child protection services (like the Family and Child Protection Services Unit or family crisis services) and the PCIT units to smoothen the referral and follow-up logistics to ensure the timely provision of quality services to suitable cases.

The current study is a small step towards the indigenization of a promising approach to manage severe child behaviour problems and prevent child abuse in Chinese families. It is hoped that with the concerted efforts from parents, teachers, social service professionals and the community more evidence-based effective measures can be developed to enhance the happy and healthy development of children.

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Appendix I

Background of parents who attended the Focus groups (all were females except M8 who was male and father of the target child)

	Employment Status	Gender and age of target child	Total Service sessions	Case closed condition S=Satisfactory D=dropped out
M1	Working	M/9	16	S
M2	Housewife	M/5	11	S
M3	Housewife	M/7	19	S
M4	Housewife	M/7	26	S
M5	Housewife	M/4	24	S
M6	Housewife	F/5	24	S
M7	Housewife	F/4	15	S
M8	Full time management	F/3	15	S
M9	Housewife	M/9	21	S
M10	Housewife	F/3	19	S
T1	Housewife	M/6	29	S
T2	Housewife	F/2.5	7	S
T3	Housewife	M/5	14	S
T4	Housewife	M/4	7	S
T5	Housewife	F/7	13	S
T6	Housewife	M/8	22	D
T7	Full time professional	M/6	21	S

Appendix II

PCIT therapist personal reflection guide.

	Good practices	Problems and suggestions for improvement
PCIT theoretical basis		
1. Behaviouralism		
2. child development		
3. parent-child system		
4. training/pedagogical approach with immediate feedback and practice		
5. well-structured phases; clear goals		
Content		
1. concepts, principles		
2. skills		
Client group		
1. Age group		
2. Nature of problem		
3. Referring agency		
4. Promotional strategies		
5. Physical setting		
6. Teaching aids, toys		
7. Worker background and PCIT training		
8. timing: no jobs		
Before		
1. case screening		
2. case briefing		
During		
1. praise to parents		
2. telephone follow-up		
3. other incentives?		
4. immediacy in feedback		
After		
1. follow-up evaluation		
2. booster session?		
3. alumni gatherings?		
Sensitivity of instruments		
1. ECBI		
2. PSI		
3. CDI		
4. PDI		
5. success criteria		
Other measures		

Appendix III

Procedure of administration of each measurement

Measurement	Responsible worker	Implementation method	Justifications
DPICS - A	Intake worker	● After finishing measurement tools and clinical interview. ● 15 min observation at the intake, mid term and termination session with coding sheet, only code the CDI 5 minutes in this research. ● 5 min coding before each coaching session start.	● The Chinese version of DPICS-A was translated by a post-graduated psychology student and reviewed by the three PCIT therapists and their supervisor. ● Insufficient resource to validate this system at this moment. ● Quarterly inter rater rating for reliability by PCIT therapists.
ECBI	Intake worker	● Before intake session. Can be filled up at home and bring back to intake. ● Before mid term evaluation session and termination session. Can be filled up at home and bring back to evaluation session. ● Pencil and paper. ● Read to the participants exactly the wording if an illiterate parent.	The Chinese version of the ECBI has been validated by Education Department in Hong Kong. Although these are not DSM-based scales, the items content are quite related to the diagnostic criteria for ADHD, ODD and CD (Collett, et. al., 2003). A study analyzes the factor structure of the ECBI through a confirmatory factor analysis (Burns & Patterson, 2000). The analysis identifies 3 meaningful factors (i.e. Oppositional Defiant Behavior Toward Adults, Inattentive Behavior, and Conduct Problem Behavior) and a fourth, poorly defined factor. The result indicates that the three factors provide an excellent fit with both boys and girls. This classification can assist our analysis on the treatment effect for child's specific behavior.
PSI	Intake worker	Ditto	● The cut-off point has not been established in Lam's validation but the factor structure of the Chinese version is quite similar to the original factor structure suggested by Abidin (1990)

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