CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter discusses six major sections that present research methods that have been implemented in the study to answer research objectives and research questions. All sections discusses are as the following:

1. Research design
2. Population and sampling
3. Instruments
4. Abbreviated Intensive PCIT module
5. Data collection
6. Data analysis

3.2 Research Design

3.2.1 Single-Case Experimental Design (SCED)

This study employed a single-case experimental design (SCED) to examine the intervention effects of Abbreviated Intensive PCIT on noncompliance behaviour among preschool children who were diagnosed with ADHD and parents' acquisition of CDI and PDI parenting skills. Researchers in counselling psychology often use SCED because it is particularly well suited to examine the processes and outcomes of

psychological and behavioural treatment (Borckardt, Nash, Murphy, Moore, Shaw, & O'Neil, 2008; Kazdin, 2010). The SCED has been proved as highly flexible method that can be used to systematically test the effectiveness of treatment as well as to monitor the progress among a small number of subjects (Cowan, Hennessey, Vierstra, & Rumrill, 2004; Engel & Schutt, 2012; Kratochwill & Levin, 2014). Single case refers to the respondent or cluster of respondents under investigation. In contrast to an experimental group design in which one group is compared with another group, respondents in a single-case experiment research provide their own control data for the purpose of comparison in a within-subject rather than a between-subjects design (Fraenkel & Wallen, 2006; Kratochwill & Levin, 2014; Trochim, 2006). The central goal of the SCED is to determine whether a causal or functional relationship exists between a researcher-manipulated independent variable (IV) and a meaningful change in the dependent variable (DV). The SCED also involves a comparison between two experimental time periods, known as baseline and treatment phases. This approach typically includes collecting a representative baseline phase to serve as a comparison with treatment phases (Kratochwill & Levin, 2014).

3.2.2 Repeated Measurement

The basic requirement of the SCED is a repeated measurement of the assessment across each phase in order to draw valid inferences regarding the effect of the treatment. The same reliable and valid measurements have been applied on a regular basis, and any change over time can be accurately assessed, thus, researcher can make confident statements about the effect of the intervention (Alberto & Troutman, 2006). There were two main reasons for using repeated assessment in this study. First, it can

reduce the estimates variance of the treatment-effects which allow descriptive statistical to be made with fewer participants (Barret, 2013). This enable researcher to identify the effects of treatment (Abbreviated Intensive PCIT) by comparing the differences between pre-test and post-test mean scores. Second, with consistent and appropriate assessment methods across assessment occasions, it allows the researcher to rule out the possibility that behavioural changes in subjects are due to the changes in assessment procedures (Nock, Michel & Photos, 2007). The purpose of repeated measurement in this study was to measure the respondents at successive times of baseline, intervention (B-IT and B-MT) and follow-up. Thus, the key advantage of repeated assessment is that individual differences between respondents are removed as a potential confounding variable and required fewer respondents, since the data for all conditions derived from the same respondents (Barret, 2013). To detect changes in respondents across the course of the study, the repeated measurement of three different assessments (ECBI, DPICS-III and TAI) have been conducted in three phase-comparison analyses for each dyad. Below is the list between pre-treatment, post-treatment, and follow-up comparison analyses conducted.

(i) Pre-treatment = A_1 with B-IT, B-MT and F_1

(ii) Post-treatment = B-IT with B-MT

(iii) Follow-up = F_1 with A_1, B-IT and B-MT

3.2.3 A-B Single-Case Experimental Design

The design of A-B SCED across families was used to investigate the intervention effects of the Abbreviated Intensive PCIT protocol. The APA Task Force on Evidence-Based Practice endorses and recognises the A-B of SCED as an effective

strategy for identifying promising intervention approaches (Borckardt et al., 2008; Westen & Bradley, 2005). All respondents were determined to be assessed before and after receiving the Abbreviated Intensive PCIT which include four phases: Baseline (A_1), Intensive Treatment (B-IT), Maintenance Treatment (B-MT), and Follow-up (F_1). In summary, this research design has been explained in Table 3.1 below:

Table 3.1: A-B Single-Case Experimental Design

Respondents	A_1	Treatment X_1		F_1
	Pre-test	B-IT	B-MT	Post-test
D1	0_1	0_2	0_3	0_4
D2	0_1	0_2	0_3	0_4
D3	0_1	0_2	0_3	0_4
D4	0_1	0_2	0_3	0_4
D5	0_1	0_2	0_3	0_4
D6	0_1	0_2	0_3	0_4

Note:

A_1	=	Baseline
B-IT	=	Intensive Treatment
B-MT	=	Maintenance Treatment
D	=	Dyad
X_1	=	Abbreviated Intensive PCIT
F_1	=	Follow-up
0_1	=	Pre-test
0_2	=	Post-test (B-IT)
0_3	=	Post-test (B-MT)
0_4	=	Follow-up test

In this study, the pre-test involved the researcher conducted pre-test (baseline measure) assessments (ECBI and DPICS-III) before treatment. The post-test involved the researcher provided respondents with same assessments as pre-test (ECBI and DPICS-III) each time starting from the first session of intervention B-IT, then, followed by B-MT to see the effect of treatment on targeted behaviour changes. After one month the treatment has completed, the researcher returned to meet the respondents for the follow-up test. For the follow-up test, the researcher provided

respondents with the same assessments as post-test (ECBI and DPICS-III). There was additional test used (TAI) during post-test and follow-up test to measure the level of parents' satisfaction towards the treatment. Then, these three different tests (pre-test, post-test and follow-up test) have been compared to see behavioural changes among respondents as a results of the treatment.

3.3 Population and Sampling

The population of the study was preschool children who enrolled under Special Education Integrated Programme (SEIP) coordinated by Special Education Department, under Ministry of Education and they were certified by medical doctor as having ADHD. The SEIP is purposely for children with learning disabilities and the criteria include such as mild level of Autism, Syndrome Down, and ADHD (Supiah & Lindsay, 2010). According to Family Health Development Division, the numbers of registered preschool children with ADHD aged between five to six years old were 24 in the year 2011 and 28 in the year 2012 (Ministry of Health, 2013). The respondents were recruited from this population of 28 preschool children with ADHD as registered with Ministry of Health in the year 2012. The researcher ruled out carefully the inclusion and exclusion criteria for parent-child dyads as the following:

3.3.1 Parent-Child Dyads Inclusion Criteria

Children eligible for this study met the following inclusion criteria: (i) between the ages 5-to-6, (ii) certified by medical doctor as having ADHD, (iii) living with participating parents, and (iv) moderate to severe disruptive behaviour as measured by

ECBI at least 131 scores. Parents' inclusion criteria were, (i) living in the same home as the identified child, and (ii) able to be contacted by telephone on a weekly basis.

3.3.2 Parents-Child Dyads Exclusion Criteria

The exclusion criteria for children and parents included: (i) parent or child diagnosed with a major significant cognitive or development delay, (ii) parent or child diagnosed with a major psychiatric illness or medical condition that impairs judgment, (iii) parent unable to communicate via telephone on a weekly basis, and (iv) the child received other psychosocial treatments.

3.4 Research Procedure

This section details the implementation of the sampling procedure (official study approvals and sample of research respondents).

3.4.1 Official Study Approvals

The official study approval was done by the researcher as follow:

1. Official permission was applied by researcher to conduct research among ADHD preschool children from Ministry of Education under Educational Research and Planning Division (ERAS) and District Education Office (DEO) in Selangor (see Appendices I and J).

2. Once the approval for conducting the study received from ERAS and DEO, researcher began the process of gathering the name, address and contact numbers of government preschools which conducted the SEIP for learning

disabilities. The target population was concentrated on the 28 ADHD preschool children who were registered with Ministry of Health in the year 2012. Refer to Table 1.2 (*Detected and Registered Special Needs Cases in Children and Teenagers in 2011 & 2012*).

3. Then, the researcher met the headmasters of respective schools to brief about the study, and provided them information and treatment hand-out of Abbreviated Intensive PCIT (for parent) (see Appendix G).

4. Once permission was given by the respective headmasters, the lists of selected preschool children with ADHD provided to the researcher.

5. Then, the researcher asked for permission to meet parents and the child at their home. After received permission from parents, researcher provided them with brief introduction to the research study. The informed consent form also provided to parents at this stage (see Appendix F).

6. Then, the researcher started to begin the initial screening with participating parent-child dyads after receiving the consent.

3.4.2 Sample of Research Respondents

This study employed purposive homogeneous sampling to concentrate on noncompliance behaviour of ADHD in child respondents that were of interest, which allow the researcher to provide answer for the research questions. Thus, selecting research respondents was carefully made to ensure that the parent-child dyads were purposively chosen to be included. The study required that only children and parents who fulfil the determined criteria in respondent selection as stated in 3.3.1 and 3.3.2

will be chosen. Based on 28 registered cases in the year 2012 involving ADHD among preschool children aged five to six years old, there were 21 families who met the inclusion criteria as stated in 3.3.1, and seven families who met the exclusion criteria as stated in 3.3.2. These seven families were not included in the study because the children' age were seven years old during the time of this study conducted (2013). There were two out of 21 families from Sabah and the data provided about these families were unable to be contacted by the researcher. Therefore, the 19 families from Selangor state population called to learn more about the research study that would be conducted. Then, three out of them declined to participate after reviewing the informed consent and stated that, they felt not comfortable to get involved in unfamiliar treatment. Ten families were not selected because four families were participating in other psychosocial treatments and six families because their child diagnosed with some psychiatric illness. Finally, another six families agreed to participate in this research study and completed the Abbreviated Intensive PCIT treatment protocol throughout A, B-IT, B-MT and F_1. There were five SEIP preschool schools from Selangor state included in this study as in the Table 3.2.

Table 3.2: SEIP Schools (Preschool) Involved

SEIP (Preschool)	Location	Number of Sample *(n)*
SEIP 1	Batu Unjur	2
SEIP 2	Saujana Utama	1
SEIP 3	Selayang Jaya	1
SEIP 4	Cheras	1
SEIP 5	Teluk Gadong	1

Note: The total number of sample, n=6

Based on the data, all the child respondents were Malay boys who aged six years old. These six children with ADHD included in the study as the following:

Dyad 1

Dyad 1 was referred by the child's teacher. The child had no sibling. The parent was the child's biological father (28 years old) who raised him since birth. The parent completed Sijil Pelajaran Malaysia (SPM) and the yearly household income about RM25,000. During the initial screening, the father reported the following behaviours to be most problematic: fidgeting and squirming in the seats, talking nonstop, dashing around, touching or playing with anything and everything in sight, being constantly in motion and having difficulty doing quiet tasks or activities, does not follow through on instructions, does not seem to listen when spoken to directly, often talks, runs or climbs excessively, dawdling when getting dressed, interrupting, and hitting parents. According to parent, teachers reported that the child often fails to give close attention to details and makes careless mistakes in schoolwork, and other activities. The child at school also having the difficulty waiting for his turns in games and often interrupts conversations or others' activities. Father was also reported that the medical treatment for the child discontinued because the psycho-stimulant medication given made the child became very slow in learning.

Dyad 2

Dyad 2 was referred by the child's teacher. He had two younger brothers, four and three years old. The parent was the child's biological father (33 years old) who raised him since birth. The father has Diploma in Teaching from Polytechnics Institution and the yearly household income about RM35, 000. During the initial screening, the mother reported the following behaviours to be most problematic: arguing about rules, verbally abusing his siblings, being very impatient, and blurting out answers,

inappropriate comments, showing his emotions without restraint and acting without regard for consequences, forgetful, butts into conversations or games, runs and climbs excessively. According to the father, at school, teachers reported that the child had difficulty to sustain an attention in tasks or play activities, does not give close attention to teachers, talk excessively and also often blurt out answers before questions have been completed. The father also reported that the child started the behavioural intervention programme last year in October 2012 but, discontinued because parent did not have much time to bring the child to see the doctor at hospital.

Dyad 3

Dyad 3 was referred by the child's teacher. He had no sibling. The parent was the child's biological mother (28 years old) who raised him since birth. The mother has completed Diploma in Teaching from Teaching Institution and the yearly household income about RM40, 000. During the initial screening, the mother reported the following behaviours to be most problematic: difficult in playing or engaging in leisure activities quietly, talking back to parents excessively, does not seem to listen when spoken to directly, fidgeting and squirming in the seats, impatient, touching or playing with anything and everything in sight, and does not follow through on instructions. According to his mother, at school, teachers reported that the child has difficulty sustaining attention in tasks or plays activities, careless mistakes in schoolwork or other activities, and often interrupt conversations or others' activities, and does not seem to listen when spoken to directly. Mother also reported that the medical treatment for the child discontinued because the stimulant given made the child loss of appetite, trouble in sleeping, nervousness, and very slow in memory.

Dyad 4

Dyad 4 was referred by the child's teacher. He had one elder brother who was 12 years old and one younger sister who was 4 years old. The parent was the child's biological father (41 years old) who raised him since birth. The father was completed SPM and the yearly household income to be less than RM40, 000. During the initial screening, the father identified the following behaviours to be most problematic: arguing about rules, hitting parents, whining, verbally abusing parents, and physically abusing his siblings, fidgeting and squirming in the seats, talking nonstop, dashing around, touching or playing with anything and everything in sight, being constantly in motion and having difficulty doing quiet tasks or activities. According to the father, at school, teachers reported the child being very impatient, blurting out answers, inappropriate comments, showing his emotions without restraint and acting without regard for consequences, having difficulty waiting for things he want or in games and often interrupt conversations or others' activities.

Dyad 5

Dyad 5 was referred by the child's teacher. He had no sibling. The parent was the child's biological father (28 years old) who raised him since birth. The father was completed SPM and the yearly household income is RM30, 000. During the clinical interview, the father identified the following behaviours to be most problematic: often runs or climbs excessively, hitting parents, does not seem to listen when spoken to directly, talking back and profanity towards parents, and talk excessively. According to father, at school, teachers reported that the child being very impatient, blurting out answers, inappropriate comments, showing his emotions without restraint. The child

also has fidgets with hands in seat, difficulty in waiting turn and in focusing on one thing, talking nonstop, dashing around, touching or playing with anything and everything in sight, being constantly in motion and having difficulty doing quiet tasks or activities. The father reported that psychosocial treatment arranged for the child was not attended because parent did not have time to bring the child to the hospital.

Dyad 6

Dyad 6 was referred by the child's teacher. He had one elder sister aged seven years old. The parent was the child's biological mother (35 years old) who raised him since birth. The mother was completed Diploma in Teaching and parent reported the yearly household income about RM45, 000. During the initial screening, the mother reported the following behaviours to be most problematic: fails to give close attention to details, miss details, does not seem to listen when spoken to directly, become easily confused, move slowly even and does not follow through on instructions. According to mother, at school, teachers reported that the child often makes careless mistakes in schoolwork, and other activities. The child often avoids and reluctant to engage in tasks that require sustained mental effort, has difficulty in focusing attention or organising tasks or learning something new, easily distracted, loses things necessary for tasks or activities, forget things and frequently switch from one activity to another and become bored with a task.

Tables 3.3 (a) and 3.3 (b) show the summary of demographic information of the child and parent respondents.

Table 3.3a: Child Respondents Demographic Information

Dyad	Age	Gender	Sibling
1	6	Boy	No sibling
2	6	Boy	1 from 3 siblings
3	6	Boy	No sibling
4	6	Boy	2 from 3 siblings
5	6	Boy	No sibling
6	6	Boy	2 from 2 siblings

Table 3.3b: Parent Respondents Demographic Information

Dyad	Parent	Age	Education	Yearly Household Income
1	Father	28	SPM	RM25,000
2	Father	33	Diploma	RM35,000
3	Mother	28	Diploma	RM40,000
4	Father	41	SPM	RM40,000
5	Father	28	SPM	RM30,000
6	Mother	33	Diploma	RM45,000

3.5 Instrumentation

The three instruments have used repeatedly in this study: ECBI, DPICS-III and TAI.

3.5.1 Eyberg Child Behaviour Inventory (ECBI)

The ECBI is a 36-item parent report instrument used to identify common child disruptive behaviour problems that most frequently occur in children between 2-to-16 years of age (Eyberg & Pincus, 1999). These disruptive behaviours include hyperactivity, impulsivity, noncompliance, defiance, aggression, and tantrums. It measures disruptive behaviours in terms of their frequency (Intensity scale) and the degree to which these behaviours are problematic for the parent (Problem scale). Only the Intensity scale was used in this study. The Intensity scale measures the frequency

of children's behaviour on a 7-point Likert scale from (1) *never*, to (7) *always* are summed to yield an overall problem score ranged from 36 to 252, with a normative mean of 96.6 and a standard deviation of 35.2. The raw scores cut-off for clinical significance is ≥ 131 and the T-scores cut-off for clinical significance is ≥ 60. The higher scores (over clinical cut-off) reflect greater concern about the child's disruptive behaviours. The scores show between 114-130 (mild disruptive behaviour), 131-156 (moderate disruptive behaviour) and scores more than 156 (severe disruptive behaviour). The ECBI was administered during baseline (A_1) and throughout all intervention phases (B-IT, B-MT and F_1). The acceptable baseline in this study referred to the stability in ECBI scores at least three days in a row when the child showed similar scores of the behaviours. A copy of the ECBI is in Appendix B.

3.5.2 Dyadic Parent-Child Interaction Coding System-III (DPICS-III)

The DPICS-III has been developed by Eyberg et al. (2009) is a behavioural observation system designed to code the important parent and child behaviours that maintain particular parent-child interaction patterns associated with ineffective parenting styles and disruptive child behaviour (Eyberg, 2004). The DPICS-III coding conducted in three standard parent-child interaction situations: Child-Led Play (CLP), Parent-Led Play (PLP), and Clean-up (CU) in 5-minute coding session of each situation. The evaluation of the effectiveness of PCIT is accomplished typically by using the DPICS (Robinson & Eyberg, 1981) which consists of parent and child behaviour codes that focus on changes in parenting verbalisation and child compliance behaviours (Vess, 2008).

3.5.2.1 Three Situations of Abbreviated Intensive PCIT Coding (DPICS-III)

The three main situations conducted during Abbreviated Intensive PCIT: (i) Child-Lead Play (CLP), (ii) Parent-Child Play (PLP) and (iii) Clean-up (CU) are presented in 5-minute segments. The purpose of CLP is to provide one-to-one play interaction between a parent and a child in which the child is helped to direct and lead the play in any way the child wishes, unless there is harmful or destructive activity. Then, the purpose of PLP is one-to-one play interaction between a parent and a child in which the parent is helped to direct and lead the play in any way the parent wishes. The third component is CU which intended to teach the child to clean up the toys at the end of the parent–child interaction, not at the end of child-directed play. This is to avoid confusing the child about the role of parental help. The CU should be done without the parents' help but with the parents' direction. Although this component may seem simple, it tends to be a challenging situation because significant behaviour problems are often displayed during this phase. The expectation is that this phase lasts 5-minute (McNeil & Hembree-Kigin, 2010). For the purpose of the study, parent's verbalisations of Do and Don't Skills during PDI in CLP situation and child's compliance behaviour towards parental commands during PDI in PLP and CU situations have been coded.

1. **CDI Parenting Skills Coding by DPICS-III**

The Do Skills include Labelled Praises (LP), Reflections (RF), and Behavioural Descriptions (BD). LP is a verbalisation expressing a favourable judgment of an attribute, product, or behaviour of the child is which is intended to teach the child specifically what he or she can do to receive further parent approval. RF is a

declarative phrase or statement that has the same meaning with child verbalisation. The reflection may paraphrase or elaborate upon the child's verbalisation but may not change the meaning of the child's statement or interpret unstated ideas. BD is non-evaluative, declarative sentences, phrases, or verb describes that person's on-going or immediately completed (<5-second) observable verbal or nonverbal behaviour.

The Don't Skills include Informative Questions (IQ), Descriptive Question (DQ), Indirect Command (IC), Direct Command (DC) and Negative Talk (NTA). Questions request an answer but do not suggest that behaviour is to be performed by the other person. There are two types of questions: DQ is a descriptive or reflective comment or statement expressed in question form which requires no more than a brief affirmative or negative response (such as "yes" or "no"), even if the child gives additional information in response or does not respond. IQ is a question that request specific information from the child other than a brief response (such as yes, no, maybe), even if the child gives a brief response (such as "don't know") or no response at all. Commands are statements in which the speaker (parent or child) directs the vocal or motor behaviour of the other. IC is declarative statements that contain an order or direction for a vocal or motor behaviour to be performed and indicate that the child is to perform this behaviour. DC is a suggestion for a vocal or motor behaviour to be performed that is implied or stated in question form. NTA is a verbal expression of disapproval of the child or the child's attributes, activities, products, or choices. Negative talk also includes sassy, sarcastic, rude, or impudent speech (Eyberg, 2004). The mastery criteria of parent's verbalisation, each parent must demonstrate at least: 10: BD, 10: RF, 10: LP and not more than 3 total IQ or DQ, IC or DC, and NTA during CLP sessions within the 5-minute coding period.

2. PDI Parenting Skills Coding by DPICS-III

Then, child compliance behaviours were coded during PLP and CU situations. Compliance (CO) was coded when the child was fully engaged in the task directed by the parent and did not need parental intervention to maintain task orientation. For example, the child fully endorsed the parental agenda, stayed on task willingly, and embraced the task wholeheartedly. For example, they even set their own goals for the task such as spontaneously moving to another pile of toys upon completion of the first pile. Noncompliance behaviour (NOC) has been coded when the child does not perform or stops attempting to perform the requested behaviour within the 5-second interval following the command from parents. Then, no opportunity for compliance (NOC) was coded when the child was not given an adequate chance to comply with a command. The mastery criteria of child's compliance at least 75% of the parental commands should be obeyed by the child (Eyberg, 2004). In this study, at least nine commands should be obeyed by the child. Due to time constraint of 5-minute, parents were asked to give the total of 12 commands for their child during the coding session (Lewis, 2010). The DPICS-III was administered during baseline (A_1) and throughout all intervention phases (B-IT, B-MT and F/). The Table 3.4 shows the individual DPICS-III category of coding during CDI (LP, RF, and BD) and PDI (CO, NC, and NOC) phases. A copy of the DPICS-III is in Appendix C.

Table 3.4: Individual DPICS-III Category Definitions

Category	Abbreviated Definition
Labelled Praise **(LP)**	A positive evaluation of a specific behaviour, activity or product of the child.
Reflective Statement **(RF)**	A declarative verbalisation with the same meaning as the child's previous verbalisation.

Behaviour Description **(BD)**	A non-evaluative vocalisation describing the child's activity.
Indirect Command **(IC)**	A suggestion for a vocal or motor behaviour to be performed that is implied or in question form.
Direct Command **(DC)**	A declarative statement that contains an order for a vocal or motor behaviour, identifying the child as subject.
Informative Question **(IQ)**	A question that requests specific information from the child other than a brief response (e.g., yes, no, maybe).
Descriptive Question **(DQ)**	A descriptive statement expressed in question form which requires no more than a brief or negative response.
Negative Talk **(NTA)**	A verbal expression of disapproval of the child or the child's attributes, activities, products; sassy, rude or impudent speech.
Child Compliance **(CO)**	The child performs the requested behaviour within 5-second following the command.
Child Noncompliance **(NC)**	The child does not perform or attempt the requested behaviour within 5-second following the command.
No Opportunity to Comply **(NOC)**	The child is not given an adequate chance to comply with a command within 5-second (e.g., the command calls for vague, unobservable, or future behaviour).

Source: Adapted from Manual for the DPICS-III: Version 3.07(Eyberg et al., 2009)

3.5.2.2 DPICS-III Home Setting

1. Play Area Setting

The DPICS-III observations, typically are conducted in a playroom equipped with a table, two chairs, a time-out chair placed in a corner of the room, and five sets of toys (Eyberg et al., 2009). However, DPICS-III observation in this study conducted at respondents' home at family hall since all families have no playroom in their house but still equipped with similar materials of one table, two chairs, one time-out chairs, one-time out room, and toys. The toys are taken out of their containers, with two sets placed on the table and the remaining toys placed on the floor near the remaining corners of the room. The recommended toys during the DPICS-III were Legos, building blocks, cars, toy farm with animals, crayon, stencils, paper, and child

scissors. The toys that are encourage rough play (bat, balls, punching box), toys that are could cause harm to self or others (toy guns or swords), toys that get out-of-hand and require limit setting (paint, aeroplane) were not allowed.

2. Coding and Coaching Setting

During treatment and DPICS-III assessment, it was only one child and one parent (either father or mother) should be allowed in the treatment. Basically, the pre-treatment and post treatment assessments of DPICS-III coding begins after a 5-minute warm-up period (Eyberg et al., 2009). The DPICS-III was conducted on four occasions during A_1, B-IT, B-MT and F_1. The purpose was to compare the progress of Abbreviated Intensive PCIT on targeted behaviours in both parent and child before and after the treatment. In this study, coding will be first conducted by the researcher and during this session, researcher was identifying weaknesses in parent-child interaction. Then, parent has been guided how to improve the CDI and PDI parenting skills throughout the coaching session. Before beginning the play task, parent was provided with a standard prompt that he or she should play with the child. The researcher then left the play area and the parent-child play session began. The researcher and her two coders were observed the play session between parent and child and coded the session. The parent's verbalisation of Do and Don't Skills, child's compliance behaviours towards parent commands have been coded using DPICS-III. For each situation (CLP, PLP, and CU), it was 5-minute coding session.

Then, parent was observed and coached using a wireless communications set consisting of a head set with microphone that the researcher wore and an ear receiver that the parent wore at each treatment session. Each parent was coached using this

way in which enables the researcher to present the directions to the parents. First, during CDI skills in CLP situation, parent was asked to follow along with their child in whatever game the child chooses. Second, during PLP, parent was instructed to keep the child playing according to the parent's rules. Third, during CU parent was asked to have the child clean up the play materials and toys without any assistance from the parent. In this way, the child hears the initial directions from the parent rather than from the therapist (Eyberg et al., 2009). This active practice facilitated skill development and allowed the researcher to conduct on-going assessments of parent's progress. In addition, it provides the opportunity for live-coaching and immediate feedback given by the therapist directly after observed parent's behaviours and interactions with the child. The researcher can help to can modify them as they occur.

3.5.3 Therapy Attitude Inventory (TAI)

The TAI is a 10-item self-reports developed by Eyberg and Pincus, (1999) to measure parent's satisfaction with the treatment as well as satisfaction with child behaviour following the treatment. The TAI assesses satisfaction in areas such as the parenting skills learned, the child's behaviour changes, and the type of treatment programme used. Parents were asked to rate the items on a 5-point of Likert scale from (1) *strongly disagreed* to (5) *strongly agreed*. The item ratings are summed to yield a total score between 10 and 50 with higher scores indicating greater satisfaction. The two factors structure consisted in these 10 items. Factor 1 consisted of 6-item related to parents' satisfaction with the child behaviour changes (Items: 3, 4, 5, 6, 7, 10) and Factor 2 consisted of 4-item related to parents' satisfaction with the treatment components (Items: 1, 2, 8, 9). The scores below than 25 showed (low satisfaction),

25 to 39 (moderate satisfaction) and 40 to 50 (high satisfaction). The TAI was administered at the post-intervention phases during B-MT and F_1. The entire measurement typically takes about 5-minute to complete and can be hand scored in 1-minute. A copy of the TAI is in Appendix D.

3.5.4 Open-ended Questions

The development of open-ended questions was based on the objectives of the study in which the researcher would want to explore parents' perceptions and experiences with the Abbreviated Intensive PCIT. There were four aspects have been focused by the researcher in development of the questions. The questions prepared based on information within (Matos et al., 2006) to reflect on parents' experiences about the useful aspects of the PCIT (Bagner et al., 2013; Nixon et al., 2004), to reflect parents' experiences in application of PCIT (Lewis, 2010; Leung & Tsang, 2012), to reflect the parents' perception about the cultural issues (Khan, 2013; Matos et al., 2006), and to reflect parents' perception about the including of religious elements in the treatment (Ahmed & Amer, 2012) (refer to Table 3.9). The whole interview session took about 40 minutes depending on the smooth flow of the conversation. The researcher found that these four questions were more convenient and easily understood by the respondents during the interview session.

Table 3.5: Open-ended Questions for Parent Respondents

	Question	Categories	Authors
1	Boleh anda terangkan pengalaman anda mengenai perkara berguna yang anda perolehi dari terapi PCIT (Intensif Ringkas) ini? *Can you describe on your experiences about the useful aspects that you gained from Abbreviated Intensive PCIT?*	Useful aspects of the Abbreviated Intensive PCIT	Bagner et al., 2013; Nixon et al., 2004)
2	Bagaimanakah pengalaman anda dalam mengamalkan terapi PCIT (Intensif Ringkas) ini bersama dengan anak anda? *How was your participation experience in applying the Abbreviated Intensive PCIT with your child?*	Application of Abbreviated Intensive PCIT	(Lewis,2010; Leung & Tsang, 2012)
3	Bagaimanakah penerimaan anda mengenai isu budaya yang berkaitan dengan penggunaan terapi PCIT (Intensif Ringkas) ini dalam masyarakat di Malaysia? *How do you perceive cultural issues related to the use of Abbreviated Intensive PCIT in Malaysian societies?*	Cultural issues	(Khan, 2013; Matos et al., 2006)
4	Bagaimanakah penerimaan anda sekiranya unsur-unsur agama (Islam) diwujudkan dalam terapi PCIT (Intensif Ringkas) ini? *How do you perceive if the Islamic religious elements have been created in this Abbreviated Intensive PCIT?*	Religious elements	Ahmed & Amer, 2012

3.6 Translating the Instruments

There was no Malay language version found in these three instruments (ECBI, DPICS-III and TAI). Thus, these instruments must be translated into Malay language to enable them to be used among respondents. In view of the fact that Malay language is the first language and the process of translation and adaptation of the instruments was achieved by using forward and back translation method established by the World Health Organisation (WHO) (2008). Translation was done by a team of academicians from Faculty of Education, Open University Malaysia (OUM) and Faculty of

Education, University of Malaya (UM). Below are the steps in translating these three instruments.

First step: Forward translation: By using forward translation, the English version of these instruments were translated into the Malay language by an English teacher (knowledgeable of the English-speaking culture) whose her mother tongue is Malay (the primary language of the target culture). She has a wide experience in teaching English language and translating the psychological instruments. She was required to consider the definition of the original term and attempt to translate it in the most relevant way and the target language of Malay had aimed for the related audience.

Second step: Expert panel: The bilingual translators (in English and the target language for translation) required to identify and resolve the inadequate expressions or concepts of the translation, as well as any discrepancies between the forward translation (Malay) and the original instruments (English). There were two academicians from government universities with experiences in instrument development and translation involved in this process.

Third step: Back translation: Using the same approach as that outlined in the first step, the translated instruments (Malay) then was translated back to English by an independent translator, whose mother tongue is English and who has no knowledge of the items. Finally, the translated version (Malay) which contained similar items and the one closest to the original version was accepted.

Fourth step: Pre-test the instruments: It is necessary to pre-test the instruments on the target population. Pre-test respondents should include individuals representative of those who will be administered the questionnaire (WHO, 2008). For this study,

respondents for this pre-test (piloting) the instruments were selected among preschool children who reported by teachers as having the symptoms of disruptive behaviours such as noncompliance, aggressive, defiance, hyperactivity. These samples were among the selected preschool children aged six years old who enrolled under SEIP programmes. Parents of the selected children were required to be involved in the study. There were 17 numbers of respondents involved in the pilot study and all of the children were boys. Overall, the researcher took about 45-day to obtain all data from the respondents. The Table 3.5 shows the description of pilot test sample.

Table 3.6: Description of Pilot Test Sample

SEIP (Preschool)	Child	Number of Sample *(n)*
SEIP 1	6	3
SEIP 2	6	4
SEIP 3	6	3
SEIP 4	6	3
SEIP 5	6	4

Note: The total number of sample, n=17

3.7 Reliability and Validity of the Instruments

There were three measurements tools used quantitatively in this study: (i) ECBI was used to measure the level of disruptive behaviours in ADHD children, (ii) DPICS-III was used to measure both parent's verbalisation and child compliance behaviour, and (iii) TAI was used to measure the level of parent's satisfaction toward the treatment. In addition, in order to gain insights into parent respondents' perceptions and experiences about the treatment, the researcher conducted semi-structured interview to understand how the treatment work and how it could be improved. It also allows parent respondents to discuss and raise issues to better understand how their personal

experiences of individuals match up to the instrument results. For the purpose of the study, the piloting instruments for both quantitative and qualitative were conducted during pre-test instruments to achieve reliability and validity values of the test items.

3.7.1 Reliability of ECBI and TAI Instruments

According to Chua (2011), reliability in a research refers to the ability of a measurement tool to obtain similar values when the same measurements are repeated. The most commonly used is internal consistency reliability. It is measures how consistently respondents respond to one set of items and this measure is described using Cronbach's alpha. According to George and Mallery (2003), a commonly accepted rule of thumb for describing internal consistency is as in the Table 3.6. A high value of reliability means less error from the measurement tool, thus, making the measurement more accurate and reliable. This is usually observed at the value rate of not less than 0.60.

Table 3.7 Cronbach's Alpha

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Source: Cronbach's Alpha and Internal consistency (George & Mallery, 2003)

For the purpose of the study, reliability value was monitored for all main instruments. The test method used was internal consistency, that is, a test done by searching for the correlation value between each item's scores in the test with the number of test scores

for all items in the test. If all these items are found to have a high value of correlation with the total score of all items, then the measurement tool is considered as possessing a high reliability (Chua, 2011). The Table 3.7 shows the reliability values for all instruments by using the internal consistency reliability.

Table 3.8: Cronbach's Alpha Reliability Value of Instruments

Instrument	Cronbach's Alpha (α)
ECBI	.850
TAI	.770

Note: The total number of sample, n=17

The results show that, ECBI and DPICS-III have high internal consistency reliability values and quite satisfactory. The value obtained for ECBI instrument was .850 and TAI instrument has acceptable value of internal consistency reliability values of .770. Since the internal consistency value of each instrument was more than .60, these two instruments have good content validity. Thus, these instruments were acceptable for use in the actual study.

3.7.2 Reliability of DPICS-III

In this study, parent-child interaction was observed and coded using a digital camera to record the required 5-minute segment using DPICS-III instrument. In assessing the DPICS, inter-rater reliability is the most type of reliability applied (Eyberg et al., 2005). The inter-rater reliability refers to the consistency with which two or more raters evaluate the same data using the same scoring criteria at a particular time (Bailey & Burch, 2000). The term inter-rater reliability describes the amount of agreement between multiple raters and using an inter-rater reliability formula provides

a consistent way to determine the level of consensus among raters (Stemler, 2004). The inter-rater reliability coding of the parent and child codes included in Vess (2008) investigation which conducted by two research assistants who were trained in DPICS coding to 80% agreement with a criterion video tape before coding parent-child interactions. The inter-rater agreement periodically checked over the course of the study, and re-training of coders was to occur if agreement fell below 80%. This study adapted to Vess (2008) in which the reported average agreement percentages for parent and child codes reflect the average agreement between researcher and two coders. The average agreement percentage across subject sessions was calculated using intra-class correlation coefficient (ICC).

This study established the reliability coding of DPICS-III. There were two graduate students from International Islamic University Malaysia (IIUM) trained to reach 80% accuracy with a criterion video coded. The coding session was recorded using the digital video camera with stand which provided by the researcher. The DPICS-III training involved direct instruction in the specific observation procedure and practice in coding parent-child interaction displayed in video of actual home behaviour. They were provided with training materials of Abbreviated Intensive PCIT (see in Appendix H) and DPICS-III manual coding (Eyberg et al., 2009). These two coders were trained for the following DPICS-III procedure:

1. DPICS-III coding is used as to evaluate parent-child interactions during the pre-, mid- and post-treatment 15-minute behavioural observation (5-minute of each treatment session).

2. DPICS-III coding is also used to evaluate parent-child interactions in the first 5-minute of each coaching session.

3. Code every verbalisation from parent to the child. Every sentence the parent says to the child receives a code.

4. 2-second rule: When there are 2-second pauses between phrases, each phrase should have a separate code such as red lego..yellow lego.. 2 talks.

5. Some codes have higher priority than others (i.e. Praise in a question form is still praise, because it has higher priority than a question.)

6. Incomplete statements are not coded. Random noises and sound effects are not coded. Statements parents make to themselves, such as "think aloud" comments are not coded. Singing is not coded.

7. When two complete sentences are joined by "and," "but," "so," or "because," each part is coded independently.

8. If a child is sent to time-out during the observation period, the coding should stop as soon as the child sits on the time-out chair (i.e., enters time-out) and begins again when it is clear that the time-out is over.

These data were used to calculate the specific parent and child behaviours with ICC based on benchmark scale developed by Wind, Gouttebarge, Kuijer and Frings-Dresen (2005). The ICC value of (91% to 100%) indicates a high agreement level, while ranges of values (75% to 90%) indicates a moderate level of agreement and (74% and below) indicates low agreement levels respectively. For this study, following the administration of the DPICS-III for a pilot test, the ICC values for inter-rater reliability of the two codes parent and child were as follows: parent code (.924) and child code (.915), with overall reliability of approximately .921 for both codes. The Table 3.8 presents the list of the specific codes with ICC between researcher and two

coders for parent and child codes were more than 0.90. These values showed that, inter-rater reliability agreement across CDI and PDI sessions for parent and child codes were highly correlated. Based on this pilot test results, DPICS-III employed in this study to code the specific parents' verbalisation and children' behaviours on weekly intervention basis during CDI and PDI sessions.

Table 3.9: Inter-rater Reliability for DPICS-III for Parent and Child Codes

	DPICS-III Code	Average Inter-rater Reliability %
	Parent Codes	
1.	Labelled Praise (LP)	.932
2.	Reflective Statement (RF)	.921
3.	Behavioural Description (BD)	.934
4.	Indirect Command (IC)	.950
5.	Direct Command (DC)	.920
6.	Information Question (IQ)	.922
7.	Descriptive Question (DQ)	.911
8.	Negative Talk (NTA)	.902
	Child Codes	
9.	Child Compliance (CO)	.921
10.	Child Noncompliance (NC)	.912
		.921

Note: The total number of sample, n=17

3.7.3 Validity of ECBI, DPICS-III and TAI Instruments

In testing the validity of the instruments (ECBI, DPICS-III, and TAI), the researcher used content validity to measure how well the items measure what they should measure and the data obtained from a valid test is able to show the phenomenon tested and the characteristics of accuracy must be presented. These three instruments were evaluated by the four experts who were qualified with experience in clinical psychology and counselling. These experts assessed the suitability of the items used to measure the instruments. The calculation method for content validity is based on the formula that was suggested by Sidek and Jamaludin (2005). The total score given by

each expert (X) is divided by the total maximum score of the Likert scale (25) and then multiplied by 100%. In obtaining the achievement of content validity in decimal figure, the researcher hanged it to decimal figure with 100% as 1.00 and 0% as .00 which resembling the correlation coefficient value. The percentage obtained of more than 70% shows that the instruments have good content validity as in the Table 3.8.

Table 3.10: Results of Content Instrument Validity Analyses

Instrument	Average Percentage Score	Average Validity Coefficient
ECBI	80.0	.80
DPICS-III	83.0	.83
TAI	74.0	.72

The results showed that the content validity coefficient of the instruments were .80 for ECBI, .83 DPICS-III and .74 for TAI. Since the content validity value of each instrument was more than .70, these three instruments have good content validity. These instruments were acceptable for use in the actual study. According to Sidek and Jamaludin (2005), if the draft instruments have high reliability and validity, then they considered as complete instruments and ready for use by researchers in the study.

3.7.4 Validity of Open-ended Questions for Parents

For the purpose of this study, the researcher developed and used an interview guide as in the Table 3.11. The use of the digital voice recorder was allowed the interview conversations to be recorded fully, thus, the researcher would have the opportunity to review as often as necessary to assure that full understanding has been achieved. The researcher used to tape the visual record of the interview and then, to take notes (occasionally writing down direct quotes that are deemed especially relevant) at the

same time. Later, the researcher reviewed the tape and notes of the interview session. This pilot test was to help the researcher to gain familiarity with the recording instrument and the interview guide. As suggested by Birks et al., (2007), conducting preliminary practice permits testing of the interview questions, highlight weaknesses in interview skills, and identify potential pitfalls in the interview strategy. A copy of semi-structured interview guide for Malay version is in the Appendix E.

Table 3.11: Semi-structured Interview Guide

Date and Time of Interview: _____
Dyad: _____
Age: _____
Gender: _____

1. Information to Respondent:

- The purpose of interview
- Individual and resources data collected
- What will be done with data to be protected the respondent confidentiality?
- How long the time for the interview session (40-minute)
- To make respondent understand the goal of interview

2. Goal

To explore parent's perceptions and experiences about the treatment in order to obtain more information on how the treatment influence parent and his or her child.

3. Open-ended Questions for Parent

- Can you describe on your experiences about the useful aspects that you gained from Abbreviated Intensive PCIT?
- How was your participation experience in applying the Abbreviated Intensive PCIT with your child?
- How do you perceive cultural issues related to the use of Abbreviated Intensive PCIT in Malaysian societies?
- How do you perceive if the Islamic religious elements have been created in this Abbreviated Intensive PCIT?

4. Probe

- In what way….?
- Please explain…?
- Can you tell me the time it occurs….?
- Can you tell me more about your experiences…?
- Can you tell me more about your perception….?

In testing the validity of these four questions, the researcher used content validity to measure how well the items measure what they should measure. These four open-ended questions were evaluated by the four experts who were qualified with experiences in clinical psychology and counselling. Similar to the content validity used for the instruments, these experts assessed the suitability of the items used to measure the instruments based on the formula that was suggested by Sidek and Jamaludin (2005). As the interviews were conducted in Malay language, the questions were also developed in Malay language. The results showed that the content validity coefficient based on average scores of the four experts on these four questions: Item-1 (.93), Item-2 (.90), Item-3 (.88), and Item-4 (.89) with the average score of .90 for all items. Since the content validity value of each item was more than .70, these four items have good content validity and accepted for use in the actual study.

Table 3.12: Results of Content Validity Analysis for Open-ended Questions

Items	Percentage Score	Validity Coefficient
1	93.0	0.93
2	90.0	0.90
3	88.0	0.88
4	89.0	0.89
Average	**90.0**	**0.90**

3.8 Abbreviated Intensive PCIT Module

3.8.1 Rationale and Researcher's Expertise in PCIT

The researcher has received 40-hour face-to-face of PCIT training under supervision of Practicum supervisor, Associate Professor Dr. Amber Haque during her study in Master of Clinical Psychology and Counselling from IIUM. This practicum was

attached with Department of Neurology, Institute of Paediatric, General Hospital Kuala Lumpur from years 2003-2004. The training included an overview of the theoretical foundations of PCIT, coding practice, case observations, and guided coaching with families, with a focus on mastery of CDI and PDI skills and coaching. The researcher had treated a minimum of two PCIT cases from the parent-child dyads came for the treatment at this Institute of Paediatric to completion as primary therapist or co-therapist. Until the two PCIT cases were completed, the researcher have remained in regular contact (i.e., recommended weekly, but no less than monthly) via telephone, live observation, or tape review-with Practicum supervisor. The researcher had to demonstrate her skill acquisition in these sessions: (i) CDI Didactic, (ii) PDI Didactic, (iii) CDI coaching, and (iv) PDI coaching. Then, the researcher had to achieve a minimum of 80% reliability with a Practicum supervisor in 5-minute of live coding or in continuous coding with a criteria tape.

The rationale of conducting the research in PCIT had referred back to the two cases involved in researcher's Master practicum at Institute of Paediatric with ADHD children. The PCIT treatment delivered in a form of abbreviated format (fewer sessions) than the standard session (12-16 sessions) among these children showed some improvement in children's behaviour such as less in noncompliance behaviour toward parents' commands and parents became more aware about positive communication and attachment with the affected children. Overall, there were 7-session of PCIT conducted for each family, and even though both family were not achieved the mastery criteria of CDI and PDI skills. However, the progress of treatment showed the decreasing in children's noncompliance behaviour as reported by parents. Therefore, researcher interested to develop a new parenting module of

PCIT to be used in treating disruptive behaviours specifically noncompliance behaviours among ADHD children. Since there is no PCIT study has been documented in Malaysia, thus, it is an opportunity for researcher to contribute the study in understanding the effects of PCIT (Abbreviated Intensive) on parenting skills in decreasing noncompliance behaviour in young children with ADHD.

3.8.2 Piloting Abbreviated Intensive PCIT Module

This study employed the Abbreviated Intensive PCIT to examine its intervention effects on noncompliance behaviour among preschool children who diagnosed with ADHD. The two main variables were studied in understanding the intervention effects (parent's verbalisation and child compliance behaviour towards parent's commands) in reducing the targeted behaviour (noncompliance behaviour). The PCIT was carried out by the researcher using PCIT protocol which was adopted from Eyberg and Funderburk (2011) and adapted Abbreviated Intensive format from Lewis (2010). The abbreviated describes a treatment protocol which includes fewer sessions between therapist-patient than the standard PCIT treatment and intensive denotes preserve the core components of the treatment. In this study, it was seven session were conducted include CDI and PDI phases of treatment. The module development was completed in two stages: (i) translating the module and (ii) pre-testing the module and needed to determine the reliability and validity of the module.

3.8.3 Translating Abbreviated Intensive PCIT Module

The same procedure as the translation instruments was used. The translation was done by a team of academicians from Faculty of Education, Open University Malaysia

(OUM) and Faculty of Education, University of Malaya (UM). Below are the steps in translating the Abbreviated Intensive PCIT module.

First step: Forward translation: By using forward translation, the English version of these instruments were translated into the Malay language by an English teacher (knowledgeable of the English-speaking culture) whose her mother tongue is Malay (the primary language of the target culture).

Second step: Expert panel: The bilingual translators (in English and the target language for translation) required to identify and resolve the inadequate expressions or concepts of the translation, as well as any discrepancies between the forward translation (Malay) and the original module (English).

Third step: Back translation: The (Malay version) then was translated back to English by an independent translator, whose mother tongue is English and who has no knowledge of the items. Finally, the translated version (Malay) which contained similar items and the one closest to the original version was accepted.

Fourth step: Module assessment for pilot study: Before pre-test the module, the researcher obtained information on the intervention module quality in general, especially in terms of content validity, activities available in the module, and appropriate language. The module assessment committee was elected by the researcher to assess the module from the information, theoretical basis, objective of the module, and module content. This committee was represented by four academic experts in the development of modules, parent-child intervention, counselling and clinical psychology. The researcher received feedback, recommendation, comments and experiences as input to improve the module. Once the module in a form of draft

completed, then, it has been prepared for pre-testing (piloting). The researcher brought up this matter in validating the module.

Fifth: Pre-test the module: The respondents for this pre-test (piloting) were 17 numbers of respondents (parent-child dyads) involved in the pilot study (refer to the Table 3.5 for the description of pilot test sample). The researcher had conducted Abbreviated Intensive PCIT which took 1-day session with 4-hour to be completed. The session of the module per-day was allocated a minimum of one and a maximum of two families. However, this session was not to achieve the goal of decreasing noncompliance behaviour of the participating children, but the session was more emphasise on the parenting skills about CDI and PDI. Thus, parents were exposed to new parenting skills that may help provide them with some ideas how to deal with certain disruptive behaviours in their child that may interrupted a daily functioning at home, school or even in public.

3.8.4 Validation of Abbreviated Intensive PCIT Module

Method for determining the validity of the module is similar to the method of determining the validity of test instruments (Noah & Ahmad, 2005). This is because both of the module and the test instruments are developed specifically for a test. The module validity study has been done to evaluate the level of Abbreviated Intensive PCIT. This study employed the descriptive design as suggested by Mohd Majid (2004) as it is able to explain certain phenomenon which is happening, or explore a new discipline or field which has not yet been studied. Sidek (2000) explains that a descriptive study is carried out to give an accurate systematic clarification on facts and feature of a population or a discipline. This method is suitable when conducting a

research in an area which has not been previously studied in order to answer the issues brought up in the study. The research respondents consisted of four academics from Faculty of Education, OUM and Faculty of Education, UM. Dr. Aishah Rosli from UM (Respondent 1), Dr. Azimawati Mohamad from UM (Respondent 2), and the other two experts were from OUM, Associate Professor Dr. Chung Han Tek (Respondent 3) and Associate Professor Dr. Faridah Sirajul Haq (Respondent 4).

All respondents were given a copy of Abbreviated Intensive PCIT (see Appendix H). In testing the validity of the module, the researcher used content validity to measure how well the activities represent the Abbreviated Intensive PCIT module. In order to measure it, the researcher developed a form of questionnaire based on the Module Content Validity which constructed by Jamaluddin (2002). The questionnaire contains 5-item using five-point of Likert Scale from *strongly disagree* (1) to *(strongly agree)* (5). Besides that, there is a blank space in that questionnaire to enable the experts to provide feedback and recommendation regarding the proposed module. The calculation method for content validity of this module was based on the formula suggested by Sidek and Jamaludin (2005). Refer to the Table 3.12.

Table 3.13: Results of Content Module Validity Analyses

Respondent	Percentage Score	Validity Coefficient
1	100.0	1.00
2	98.0	0.98
3	92.0	0.92
4	90.0	0.90
Average	**95.0**	**0.95**

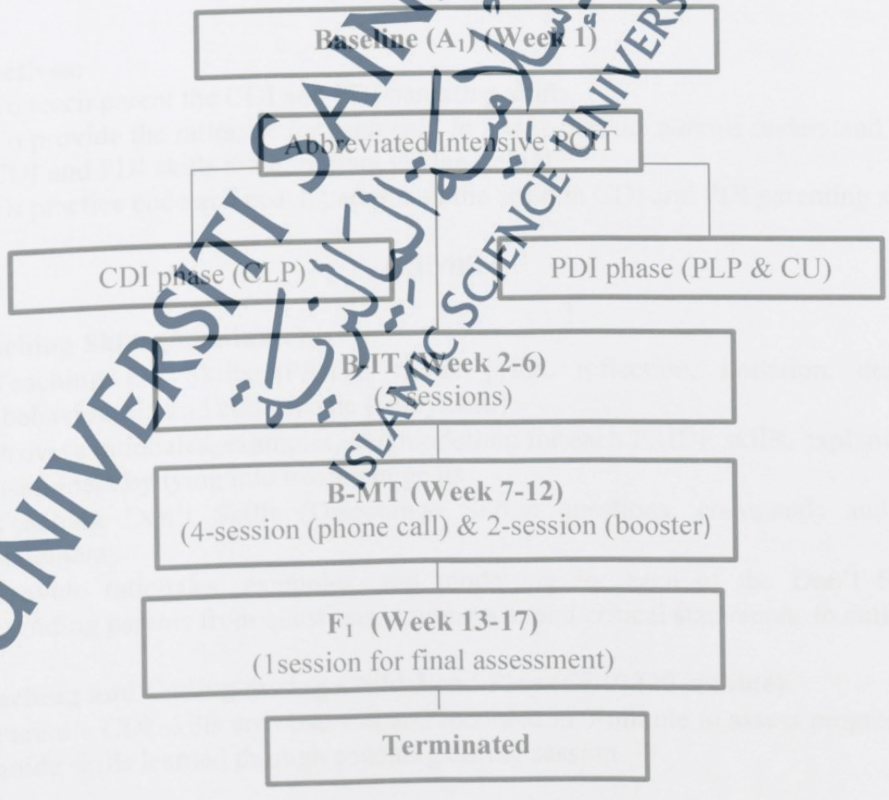
The results showed that the content validity coefficient of the module was between 0.90 and 1.00 and the average was 0.95. This shows that the Abbreviated Intensive

PCIT has good content validity. The comments received from all respondents were positive and indicated that the module was highly focused on treatment of clients.

3.9 Abbreviated Intensive PCIT Procedure

The researcher provided Abbreviated Intensive PCIT treatment hand-out for parents, (see Appendix H). This treatment was implemented in two phases: the first phase is the CDI during which parents develop child-centred interaction skills. The second phase is the PDI during which effective discipline skills are the focus. This study involved two intervention phases: Intensive treatment (B-IT) and Maintenance treatment (B-MT) (see Figure 3.1).

Figure 3.1: Abbreviated Intensive PCIT Procedure



3.9.1 Intensive Treatment (B-IT)

There were five B-IT sessions included in the treatment (intervention) which conducted for five consecutive weeks at the participating parent-child dyads' home. The main objective of B-IT is to give attention to the development of parent-child relationship and parents' behaviour management skills. Thus, it is a critical goal of Abbreviated Intensive PCIT to increase positive and nurturing interactions between parents and their child. There were five sessions in B-IT and each session has its own objective and activities that have been conducted to achieve its objectives. Below is a brief description of the objectives and activities for each session of B-IT. A copy of comprehensive Abbreviated Intensive PCIT of B-IT can be referred in Appendix H. Each session involved 2-hour and activities included in B-IT as the following:

1st Session of B-IT

The objectives:

1. To teach parent the CDI and PDI parenting skills
2. To provide the rationale for each skill in a way that the parents understand why the CDI and PDI skills are important for their child
3. To practice code and coach parent and the child in CDI and PDI parenting skills

Activities

CDI Teaching Skills (35-minute)

- Teaching "Do" Skills, (PRIDE skills: pride, reflection, imitation, description (behavioural), and enthusiastic (enjoyment)
- Provide rationales, examples, and modelling for each PRIDE skills, explaining their usefulness by tying into treatment goals
- Teaching Don't Skills (Discourage Skills: questions, commands and critical statements
- Provide rationales, examples, and modelling for each of the Don't Skills by avoiding parents from questions, commands, and critical statements to child

CDI Coaching and Coding during Child-Lead Play (CLP) (20-minute)

- Parent's CDI skills are observed and recorded in 5-minute to assess progress and to guide skills learned through coaching during session

PDI Teaching Skills (35-minute)

- Teaching compliance strategies that help children to listen to instructions and

follow directions
- Teaching discipline strategies of time-out sequence before using it with the child.
- Highlighting on defining noncompliance behaviour, such as, not obeying by ignoring, dawdling, defiance act, questioning, negotiating, or doing something else

PDI Coaching and Coding during Parent-Lead Play (PLP) and Clean-up (CU) (25-minute)
- Parent's PDI skills are observed and recorded in 5-minute of each PLP and CU to assess progress and to guide skills learned through coaching

Consultation (10-minute)
- Review CDI and PDI skills
- Discuss homework with parent, specifying which skills to practice

2nd Session of B-IT

The objectives:
1. To reinforce the parent for the use of CDI and PDI skills and their progress
2. To teach the Mastery Criteria for CDI and PDI skills

Activities

Review Homework and Teaching CDI mastery criteria (15-minute)
- Discuss homework activities on parent's sheets, note appropriateness of the activity or toys for CDI at home
- Introduce CDI Mastery criteria to parent to be achieved:
  - 10 behavioural descriptions, 10 reflective statements, 10 labelled praises, and No more than 3 questions, commands, or criticisms

CDI Coaching and Coding during Child-Lead Play (CLP) (35-minute)
- Parent's CDI skills are observed and recorded in 5-minute to assess progress and to guide skills learned through coaching during session
- The major emphasis in coaching is on good behavioural descriptions by parent to the child

PDI Teaching Skills (30-minute)
- Review homework activities of PDI skills on parent's sheets
- Review 8-effective command rules and time-out PDI Diagram
- Introduce PDI Mastery to the parent to be achieved: 75% of the commands must be performed by the child. In this case, 9 out of 12 command performed by the child.

PDI Coaching and Coding during Parent-Lead Play (PLP) and Clean-up (CU) (25-minute)
- Parent's PDI skills are observed and recorded in 5-minute of each PLP and CU to assess progress and to guide skills learned through coaching
- The major emphasis in coaching is to ignore totally any child fussing in response to this statement and to give a simple direct command

Consultation (15-minute)
- Review CDI and PDI skills
- Discuss homework with parent, specifying which skills to practice

3rd Session of B-IT

The objectives:

1. To continue shape parent's use of CDI and PDI skills with emphasis on avoiding questions
2. To develop positive expectations for Mastery criteria for CDI and PDI skills

Activities

CDI Teaching Skills (30-minute)

- Review homework activities of CDI skills on parent's sheets
- Discuss the importance of teaching behaviour through modelling and help parent understand anger management techniques
- Discuss the relevant of not asking questions to child during CDI

CDI Coaching and Coding during Child-Lead Play (CLP) (25-minute)

- Parent's CDI skills are observed and recorded in 5-minute to assess progress and to guide skills learned through coaching during session
- The major emphasis in coaching is not asking questions to child

PDI Teaching Skills (25-minute)

- Review homework activities of PDI skills on parent's sheets
- Review PDI Mastery to be achieved by parent: 75% are effective (direct, single, positive, age-appropriate, clear) and 75% of commands have correct follow through (labelled praise or warning)

PDI Coaching and Coding during Parent-Lead Play (PLP) and Clean-up (CU) (25-minute)

- Parent's PDI skills are observed and recorded in 5-minute of each PLP and CU to assess progress and to guide skills learned through coaching
- The major emphasis in coaching is the parent must end with a labelled praise for child' s compliance to the original command

Consultation (15-minute)

- Review CDI and PDI skills
- Discuss homework with parent, specifying which skills to practice

5th Session of B-IT

The objectives:

1. To get parent closer to Mastery of CDI and PDI skills
2. To provide intensive coaching of the standard PDI procedure
3. To provide an "over-learning" session for the child
4. To introduce House Rules variation of PDI

Activities

Teaching CDI Skills (25-minute)

- Review homework activities of CDI skills on parent's sheets
- Highlight on whatever CDI skills still weak. Give parents examples of the skill and engage them in a "drill"
- Explain the need to reach 10:10:10: 3 CDI mastery of skills

CDI Coaching and Coding during Child-Lead Play (CLP) (25-minute)

- Parent's CDI skills are observed and recorded in 5-minute to assess progress and to guide skills learned through coaching during session
- The major emphasis in coaching are on the use of selective attention to deal with minor inappropriate behaviours and which behaviours will be ignored and the strategies that will be used

PDI Teaching Skills (25-minute)

- Review homework activities of PDI skills on parent's sheets
- Discuss House-rule procedure
- Highlight PDI Mastery to be achieved: 75% of the commands must be performed by the child. In this case, 9 out of 12 command performed by the child.

PDI Coaching and Coding during Parent-Lead Play (PLP) and Clean-up (CU) (25-minute)

- Parent's PDI skills are observed and recorded in 5-minute of each PLP and CU to assess progress and to guide skills learned through coaching
- Parent demonstrate the capability in giving effective commands
- The major emphasis in coaching is to give Clean-up directions to see the child's compliance behaviour

Consultation (20-minute)

- Review CDI and PDI skills and child's graph of weekly ECBI
- Review remaining problems, and consider if they would respond to running commands for positive opposites or if a standing command (house rule)
- Discuss the orientation and homework with parent for Maintenance Treatment (B-MT)

3.10.2 Maintenance Treatment (B-MT)

Following the B-IT, parents continued to be assessed in B-MT for another six weeks. The face-to-face sessions were alternated with 1-month weekly of 30-minute telephone consultation and two Booster sessions in two consecutive weeks. Below the basic content of each weekly phone call is summarised. A copy of comprehensive Abbreviated Intensive PCIT of B-MT can be referred in Appendix H.

Telephone Consultation (1-Month) in 30-Minute of Call

The objectives:

1. To review homework assignment
2. To address parent concerns about child' behaviours and problem solving strategies using CDI and PDI skills

3. To answer parents' questions and concerns as they used the skills at home
4. To obtain the report of ECBI

Activities

1. Discuss homework from the past week as the following:
   a. 5 minutes of Special Time _____ of _____ Days
   b. 5 minutes of PDI during play _____ of _____ Days
   c. Using CDI skills throughout the day _____ yes _____ no
   d. Using PDI commands during the day _____ yes _____ no
   e. Using TO chair warnings during the day _____ yes _____ no
   f. Using TO chair during the day _____ yes _____ no
   g. Using TO room during the day _____ yes _____ no
   h. Problem solve difficulties completing homework during the day
2. Problem solve difficulties completing homework during the day
3. Review weekly ECBI score
4. Address any parent concerns regarding child behaviour and implementation of CDI and PDI skills
5. Discuss on homework assignment for the next week
6. Confirm date and time of next follow-up phone call

There were two Booster sessions which conducted in 2-hour for each session. These two sessions were shared similar objectives and activities with some additional techniques in managing the child's behaviour. The treatment was officially completed after parent attended Booster sessions at the conclusion of B-MT.

1st and 2nd Booster Session

The objectives:

1. To focus on CDI and PDI parenting skills for parent who is not close to mastery criteria
2. To address whatever issues that preventing the parent from meeting Mastery criteria for CDI and PDI.
3. To highlight on child's noncompliance behaviour level of its severity (any decreasing or increasing)
4. To address House-rule and public misbehaviour practices

Activities

Child Directed Interaction (CDI): 1-hour (Coaching and Coding)

- The parent is taught how to decrease the negative aspects of their relationship with their child and to develop positive communication
- The parent is taught and coached to use CDI skills. These skills help the parents give positive attention to the child following positive behaviour and ignore negative behaviour

Goals of CDI

By learning CDI skills, parent is expected to achieve the following Mastery criteria during 5-minute DPICS-III coding in CLP situation.

- To give at least 10 labelled praise following positive child behaviour
- To reflect or paraphrase at least 10 of the child's appropriate talk
- To use at least 10 behavioural descriptions to describe the child's positive behaviour
- To avoid using not more than 3 commands, 3 questions, or 3 negative talks because these verbalisations were intrusive and often give attention to negative behaviour

Parent Directed Interaction (PDI): 1-hour (Coaching and Coding)

- The parent is taught how to direct the child's behaviour when it is important that the child obey their instruction
- The parent learned to incorporate the effective instructions and commands (e.g. commands that are direct, specific, positively stated, polite, given one at a time, given only when essential, and accompanied by a reason that either immediately precedes the command or accompanies the praise for compliance) learned during the CDI component
- The parent learned to follow through on direct commands by giving labeled praise after every time the child obeys and beginning a time-out procedure after every time the child disobeys
- The parent learned a time-out procedure to use in the event that the child disobeys a direct command. The parent begins by issuing a warning, which will lead to the time-out chair, and then to the time-out room if the child continues disobeying

Goals of PDI

By learning PDI skills, parent is expected to achieve the following Mastery criteria during 5-minute DPICS-III coding in PLP and CU situations.

- To achieve at least 75% (9 out of 12) commands performed by the child.
- To demonstrate effective commands (age-appropriate, clear, direct, specific, positively stated, polite, given one at a time, given only when essential, and accompanied by a reason

There were seven sessions throughout the intervention phases. Each session has the four main activities in its contents as the following:

1. The opening session: Researcher began with greeting parent and supporting parents to maintain involve in the treatment. The researcher then, also reviewed homework activities of parents, note appropriateness of the activity or toys using for CDI skills. It is important to motivate parents by praise their choices, or have them discuss how it worked to use that (inappropriate) activity. Then have them problem-solve until they achieve a solution.

2. Coaching (teaching): The coaching provided parents with immediate feedback on their use of the new parenting skills of CDI and PDI, which enables them to apply the skills correctly and master them rapidly. Highlight parents with the objective and activities that will be conducted for each session. It is important to motivate the children by explaining something they may wondered about the therapist (researcher) and their parents, for example,

> *"I am coming here to help you and your family to learn some new ways to get along better. I am going to give this little earpiece to your parent to wear, so that when I'm in the other place I can talk to them. Sometimes, I will tell them things to say while they play with you."*

3. Coding: The parent's CDI and PDI skills were observed and recorded during the first 5-minute of each session to assess progress and to guide skills learned through coaching. Then, based on coding, the targeted behaviours were tracked and charted on a graph at each session to provide parent with immediate feedback regarding progress in positive interactions and the achievement of Mastery skills.

4. Postponement: Researcher provided information on the next session, in term of topic, date and time and assigned them with CDI and PDI homework. This was important in helping parents to know what they should prepare for the next session.

3.10 Data Collection

There were both quantitative and qualitative data involved in this study. The researcher employed triangulation strategy to broaden understanding by incorporated both quantitative and qualitative research. The purpose of triangulation strategy is to

increase the credibility and validity of the results by using more than one data collection methods (Yaesman & Rahman, 2012). Based on the research questions, the data collection involved two phases: (i) an initial quantitative instrument phase, followed by (ii) a qualitative data collection phase. This study involved two types of dependent variables, parents' verbalisation and child' compliance behaviour towards parental commands. These two dependent variables were measured repeatedly by using three assessments: ECBI, DPICS-III and TAI throughout four phases: A_1, B-IT, B-MT and F_1. Thus, these quantitative data have been collected using the assessment of instruments (ECBI and TAI), and a structured observation in which researcher employed coding scheme (DPICS-III) to record the respondents' behaviour using digital video camera. This structured observation using the coding schemes as the ways of categorising behaviour of studied, thus, researcher and her two coders can code what have been observe in terms of how often a type of behaviour appeared. The researcher used coding scheme as it can provide quantitative data that can be analysed statistically (McLeod, 2015).

Then, the qualitative data have been collected using semi-structured interview. A semi-structured interview is a qualitative method of inquiry that combines a pre-determined set of open questions with the opportunity for the researcher to explore particular theme (Birks, Chapman, & Francis, 2007). This technique was used by researcher to collect qualitative data by allowing parent respondents the time and scope to talk about their perceptions and experiences about the treatment (Abbreviated Intensive PCIT). There were four aspects have been focused by the researcher using open-ended questions: (i) parents' experiences about the useful aspects of the Abbreviated Intensive PCIT, (ii) parents' experiences in application of Abbreviated

Intensive PCIT, (iii) parents' perception about the cultural issues, and (iv) reflect parents' perception about the including of religious elements in the treatment. The focus of this semi-structured interview was to understand the parent respondents' point of view rather than make generalisations about behaviour. Therefore, it provided the opportunity for the researcher to explore the emergent themes that may rise from the questions. The use of the digital voice recorder was to allow the interview conversations to be recorded by the researcher in this study. The Table 3.10 summaries the data collection method based on triangulation strategy.

Table 3.14: Summary of Data Collection Method

Methodology	Quantitative	Qualitative
Data Collection	Assessment	Interview
Approach	**ECBI** (Questionnaire)	**Semi-structured Interview** (Interview Guide)
	DPICS-III (Coding scheme and structured observation)	
	TAI (Questionnaire)	
Phase of Collection	**First Phase** A_1, B-IT, B-MT, F_1	**Second Phase** F_1

In addition, the initial screening was conducted to screen the inclusive and exclusive criteria of parent-child respondents before recruited them in the study. Following is the data collection procedure throughout four phases: A_1, B-IT, B-MT and F_1. Each participating parent either father or mother required to complete the assessments.

3.10.1 Initial Screening

The initial screening procedure was required to screen the eligibility criteria of parent-child respondents to be included in the study. The researcher controlled the

participation of respondents by employed homogenous sampling (preschool children with ADHD) based on inclusive (refer to 3.3.1) and exclusive (refer to 3.3.2) criteria. During the initial screening, parents were asked by researcher to determine their eligibility and the child to include in the study. Those parent or child diagnosed with a major significant cognitive or development delay, psychiatric illness or medical conditions that impair their judgment, and received other psychosocial treatments were not included. Then, parents were required to complete the ECBI Intensity scale. Those parents who reported ECBI scores that in appropriate study range (>131) were scheduled for Baseline assessment.

3.10.2 Baseline (A_1) Assessment

The purpose of Baseline assessment was to establish a point from which pre-intervention and post-intervention differences in parent-child dyads of targeted behaviours can be compared. Parents and children who met the eligibility criteria of the study and continued to express their interest to be involved in treatment required to provide the approved informed consent. The informed consent form was completed with the researcher during this stage of assessment. Parents required completing ECBI assessment before each parent-child dyad was observed in three standard DPICS-III situations: CLP (during CDI), PI and CU (during PDI). These observations conducted at the end of the assessment session. To be continued with the treatment, the baseline data of ECBI of each dyad must be stable across the time.

A stable baseline is the best basis for starting the intervention (Hampton, Berkowitz & Nagy, 2012). This is supported by Lewis (2010) that an acceptable baseline was defined as at least three days in a row when the child showed the similar

score at least three times. The stable baseline is originally defined as at least three ECBI scores in range (131 and above) that did not display a consistent downward trend. A consistent downward trend is defined as a decline of greater than 5% (Lewis, 2010). For the present study, following the administration of the ECBI, the six participating parent-child dyad were asked to begin a baseline at the same time. The acceptable baseline in this study referred to the stability in ECBI scores at least three days in a row when the child showed similar scores. It has been found that, the ECBI scores for all dyads showed the stable baseline scores for three days. Therefore, all dyads had similar baseline assessment of three days before they started the treatment.

3.10.3 Intensive Treatment (B-IT) Assessment

Following the Baseline assessment, then, parent-child dyads were assessed in B-IT session. The purpose of assessment in B-IT session was to measure the progress of the intervention on parents acquired parenting skills and child's noncompliance behaviour. The intervention (Abbreviated Intensive BCIT) was conducted for five sessions in five weeks consecutively. Thus, there were five times ECBI and DPICS-III data have been assessed and collected from dyads in B-IT. First, parents have to complete ECBI before the beginning of the treatment session to measure the level of disruptive behaviour in each of five B-IT sessions. Second, the interactions in parent-child dyads were coded during two phases, CDI and PDI in three DPICS-III situations: CLP (during CDI), PLP and CU (during PDI). The coding for each parent-child dyad involved 1-session during CDI phase, and another 1-session during PDI phase in 5-minute which were coded by the researcher and her two coders for each of five B-IT sessions. This DPICS-III coding was important to measure the progress of treatment

effects in parents' CDI and PDI skills of parenting (positive verbalisation, giving labelled praises, and giving appropriate and effective commands).

3.10.4 Maintenance Treatment (B-MT) Assessment

The purpose of B-MT was to enhance maintenance of treatment practice at home among dyads which were recently completed B-IT session and assessment. The B-MT sessions involved parents received the telephone call from the researcher to support their treatment practices of CDI (Do Skills and Don't Skills) and PDI (effective commands and discipline the child using time-out) skills and they also received Booster session to improve these parenting skills. The Booster session was directed toward addressing parents' CDI and PDI Mastery criteria to be achieved and children' noncompliance behaviour problems based on the same original protocol content and treatment setting of Abbreviated Intensive PCIT as in B-IT. The maintenance treatment conducted in six weeks in which 4-week for the telephone call and 2-week for the Booster sessions. Following the treatment, the researcher also conducted assessment to measure the progress of maintenance treatment (B-MT) in improving or maintaining parents' CDI and PDI parenting skills and reducing in child's noncompliance behaviour. Thus, it was two different types of assessment data have been collected in B-MT, through telephone call and during Booster sessions.

All participating parents have been contacted by researcher through telephone call on weekly basis for four weeks consecutively. The assessment required at this stage was parents were asked to complete ECBI prior to each of four B-MT sessions. This ECBI assessment was conducted at the beginning of the telephone call. The researcher will read all items in ECBI and then, parents were required to provide their

answers. Then, after the telephone call sessions have been completed in four weeks, parent-child dyads continued to be assessed in two Booster sessions which conducted in two weeks consecutively. In the beginning of each Booster session, parents were asked to complete ECBI assessment. Then, parent-child dyads were involved in treatment (Abbreviated Intensive PCIT) similar to the original treatment. However, the focus of treatment was emphasised heavily on helping parents to achieve Mastery criteria for CDI and PDI parenting skills and the concern was also on helping parents in dealing with their child's noncompliance behaviour. Thus, parents' interaction with their child were observed, coached and coded. The second assessment conducted during Booster session was DPICS-III. The DPICS-III was coded during parent-child interaction in two phases, CDI and PDI in three DPICS-III situations: CLP, PLP, and CU similar to B-IT assessment session. Each parent-child dyad was coded in one session during CDI phase, and another one session during PDI phase of 5-minute of each session. The third assessment was TAI. Parents were asked to complete the TAI to measure their satisfaction with treatment conducted.

3.10.5 Follow-up (F_1) Assessment

The treatment (Abbreviated Intensive PCIT) was officially completed after parent-child dyads ended their 2-week Booster sessions at the conclusion of B-MT. Then, the follow-up assessment was conducted after one month from the date of the post-test assessment (B-MT) was administered. There were two main objectives of conducting F_1 assessment. First, to measure the treatment effects have on parent-child dyads after they completed the treatment without the therapist (researcher) intervention. This was to understand whether the intervention effects on parents' CDI and PDI skills and

children' noncompliance behaviour will have decreased, maintained, or increased. Second, this was to explore parents' perception and experiences about the treatment (Abbreviated Intensive PCIT). The reseracher facilitated the parent respondents to talk about their views or perceptions and experiences in subjectively based on open-ended questions developed by researcher.

During F_1, the assessment data of ECBI was collected but no treatment has conducted and parents will not have any contact from the researcher. Before the F_1 began, parents were asked to fill up ECBI on weekly basis for 1-month. Then, on the fifth week, the researcher and her two coders returned to each dyad's home for the final assessment. During this stage, parents were required to submit their ECBI data and have been assessed for the final assessment of ECBI, DPICS-III and TAI. This final assessment was to measure their CDI and PDI parenting skills as well as the patterns change in child noncompliance behaviour after the post-intervention. The parents' level of satisfaction toward the treatment was assessed by using TAI. Then, parents were interviewed to explore their perception and experiences about the treatment. Finally, the treatment has been terminated at all. Refer to Table 3.14 for Abbreviated Intensive PCIT assessment and data collection procedure.

Table 3.15: Abbreviated Intensive PCIT Assessment and Data Collection Procedure

	$A_{1=}$ 3 days			B-IT=5 weeks					B-MT=6 weeks						F_1=5 weeks				
Quantitative Assessment																			
ECBI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DPICS-III	✓			✓	✓	✓	✓	✓					✓	✓					✓
TAI														✓					✓
Tx				S1	S2	S3	S4	S5	T1	T2	T3	T4	B1	B2	F1	F2	F3	F4	F5
Duration				2-hour					30-minute				2-hour						2-hour
Qualitative Assessment																			
Interview Data																			✓
Week	1			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Duration																			40-minute

Note:
ECBI = Eyberg Child Behaviour Inventory
DPICS-III = Dyadic Parent-Child Interaction Coding System-III
TAI = Therapy Attitude Inventory
Tx = Treatment
S = Session
T = Telephone
B = Booster
F = Follow-up
A_1 = Baseline Assessment
B-IT = Intensive Treatment
B-MT = Maintenance Treatment
F_1 = Follow-up Assessment
✓ = Measure completed one time

3.11 Data Analysis

Since there were different types data of collection methods applied (assessment, structured observation and interview), the study employed descriptive analysis to analyse the data. This part details out about the descriptive analysis used to analyse quantitative and qualitative data. Descriptive analysis is the term given to the analysis of quantitative and qualitative data that helps describe, show or summarise data in a meaningful way (Gale, Heath, Cameron, Rashid, & Redwood 2013). In this study, the researcher analysed quantitative data using descriptive statistics, central distribution (frequency and mean), and variation (difference between the highest and lowest scores, and standard deviation). In qualitative data, the researcher looked for themes based on open-ended questions developed for the purpose of the study.

3.11.1 Quantitative Analysis

Based on single-case experimental design, there are two main approaches to data analysis, visual analysis and descriptive statistical analysis (Fisher and Wells (2008). These two types of data analyses were carried out to describe the effects of treatment between pre-test (A_1) and post-tests (B-IT, B-MT and F_1) for each respondent.

3.11.1.1 Visual Analysis

Visual analysis is the process of looking at a graph of the data points to determine whether the treatment has changed each respondent's pre-test pattern of scores in order to verify the treatment effects (Fisher & Wells, 2008). The four objective criteria used to verify the treatment effects included: (i) change in mean rate of the behaviour

from baseline to intervention phases, (ii) change in slope from baseline (presumably horizontal) to the intervention (presumably decelerating for behaviour one is hoping to reduce), (iii) shift in level of scores from baseline to intervention, and (iv) a small latency to change from one phase to the next phase (Kazdin, 2003).

The ECBI, DPICS-III and TAI data were plotted for each participating parent-child dyad to look for visual analyses of trends including: change in mean rate of the targeted behaviour from baseline to intervention conditions, change in slope from baseline to the intervention phase, and shift in level of scores from baseline to intervention. Thus, in order to determine whether these criteria have met, graphs were constructed to display rates of the target behaviour changes throughout the baseline and treatment conditions. As the main forms of analysis in single-case experimental design, graphical representation and visual inspection (Fisher & Wells, 2008) allow respondents' data to be seen in how they change over time in both baseline and treatment conditions (Kazdin, 2003). In addition, Parker, Vannest, and Brown (2009) note that the best visual analysis is commonly supported by at least the simple statistical analysis.

3.11.1.2 Descriptive Statistical Analysis

The descriptive statistical analysis was used to describe the numerical features of the quantitative data and to provide summaries about the respondents, measures, and observations that have been made. The summaries included both quantitative (summary statistics) and visual (simple-to-understand graphs). These summaries form the basis of the initial description of the data and the study investigation. The three statistical method analyses (frequency, mean, and standard deviation) were depicted as

a table or graph for graphical representation of the distribution of numerical data. According to Australian Bureau of Statistics (2013), the frequency distribution is a table that displays the frequency of various outcomes in a sample. Each entry in the table contains the frequency or count of the occurrences of values within a particular group or interval, and in this way, the table summarises the distribution of values in the respondents. The mean of the baseline and the intervention scores are calculated in order to compare the trends occurred in both baseline and treatment phases (Fisher & Wells, 2008). The standard deviation is used to measure the amount of dispersion from the average score among participants.

3.11.2 Qualitative Analysis

For the qualitative data analysis, the semi-structured interview was employed to explore parents' perceptions and experiences with the aim of gaining more insights into how the treatment affected them and their child. This collection of qualitative data develops a more understanding how the experimental treatment actually works (Creswell, 2012). Semi-structured interview used to understand how the treatment work and how they could be improved. The findings from instrument data (assessments) can be explored further with qualitative interview to better understand how the personal experiences of individuals about the treatment. There were four aspects to be analysed by the researcher: (i) the useful aspects of the Abbreviated Intensive PCIT, (ii) the application of Abbreviated Intensive PCIT, (iii) cultural issues, and (iv) religious elements in the treatment. These data were analysed by using the methods of transcribing (transcribe respondent's response), coding (link what respondent said to the categories of the study), sorting (organising excerpts of

interview according to categories), and integration (making sense of the sorted interview data) as the following steps:

First step: The researcher began with reading written notes and reviewing each interview (audio recording) twice. The first time was for content understanding, and the second time was for identification of useful comments noted based on the four aspects categories (themes) determined by researcher.

Second step: The researcher had a second person, who reviewed the transcripts to bring a fresh perspective as this may confirm the categories and lead to subcategories. The researcher also identified relevant categories and subcategories, and discarded information that not relevant to the questions.

Third step: In order to analyse the data that have been collected, the researcher coded the responses based on themes. Based on four broad categories, (i) useful aspects of Abbreviated Intensive PCIT, (ii) the application of Abbreviated Intensive PCIT, (iii) cultural issues, and (iv) religious elements, the researcher identified the sub-categories within the categories.

Fourth step: Then, the researcher identified if there were similar traits between respondents who present the same (categories) themes. The researcher presented the results of analysis by identifying and analysing the patterns which related to parents' perception and experiences about the treatment.

Fifth step: The findings of the results then validated by two other experts from UM who were the same experts for validity the research instruments in this study.

The Table 3.16 summaries research questions for child and parent respondents and instruments used in this study.

Table 3.16: Research Questions for Child and Parent Respondents and Research Instruments

		Research Instruments
	Research Questions for Child Respondents	**Assessment**
1	What are the effects of Abbreviated Intensive PCIT on the level of disruptive behaviours among preschool children who were diagnosed with ADHD?	Eyberg Children Behaviour Inventory (ECBI)
2	What are the effects of the Abbreviated Intensive PCIT on parents' acquisition of CDI parenting skills taught over the course of treatment?	Dyadic Parent-Child Interaction Coding System-III (DPICS-III)
3	What are the effects of the Abbreviated Intensive PCIT on parents' acquisition of PDI parenting skills taught over the course of treatment?	Dyadic Parent-Child Interaction Coding System-III (DPICS-III)
4	What are the parents' levels of satisfaction toward the Abbreviated Intensive PCIT in decreasing noncompliance behaviour among preschool children with ADHD?	Therapy Attitude Test (TAI)
	Research Questions for Parent Respondents	**Semi-structured Interview**
5	What are the parents' experiences the useful aspects of Abbreviated Intensive Parent-Child Interaction Therapy?	Open-ended Questions
6	What are the parents' experiences in application of Abbreviated Intensive Parent-Child Interaction Therapy?	Open-ended Questions
7	What are the parents' perceptions about the cultural issues related to the use of Abbreviated Intensive Parent-Child Interaction Therapy?	Open-ended Questions
8	What are the parents' perceptions about the including of Islamic religious element in Abbreviated Intensive Parent-Child Interaction Therapy?	Open-ended Questions

3.12 Chapter Summary

This chapter detailed out the research methodology used to examine the effect of Abbreviated Intensive PCIT on noncompliance behaviours among preschool children diagnosed with ADHD. These six children from the population of ADHD enrolled the SEIP preschool programme were determined their inclusive and exclusive criteria. The parents of these children were also determined their inclusive and exclusive criteria to be involved in the study. The A-B SCED analysis across families was used to examine the efficacy of the treatment from parent's verbalisation and child compliance behaviour throughout four different phases: A_1, B-IT, B-MT and F_1. The assessment was accomplished using several measurements: (i) ECBI to measure disruptive behaviour in children in terms of their frequency, (ii) DPICS-III to code the parent and child behaviour that focused on changes in the pattern of parent's verbalisation and child compliance behaviour, and (iii) TAI to measure parents' satisfaction about treatment in decreasing child's noncompliance behaviour.

There were three types of data collection employed in this study, assessment, coding (structured observation), and interview. The descriptive analyses were carried out to trace the effects of Abbreviated Intensive PCIT before and after the treatment for each respondent, and also to explore parents' perceptions and experiences about the treatment with the aim of gaining more insights into how the treatment affected them and their child. These descriptive analyses used the following: (i) descriptive statistical analysis (frequency, mean and standard deviation), (ii) visual analysis (graphical data representation), and (iii) semi-structured interview (open-ended questions).