

# Parent Education Database in Hong Kong – A Pilot Study

Education and Manpower Bureau (Parent Education Implementation Team)

Department of Health

The University of Hong Kong

Caritas-Hong Kong

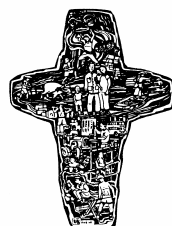
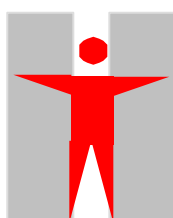
Christian Family Services Centre

Hong Kong Family Welfare Society

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Education and Manpower Bureau



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<sup>1</sup> Research design, funding programmes and questionnaires, data management and printing of reports

<sup>2</sup> Data analysis and report writing

<sup>3</sup> Research design, data analysis and report writing

<sup>4</sup> Programme implementation, data collection and data entry

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## **Abstract**

This study was a pilot study to examine the effectiveness of parent education programmes and the factors related to the effectiveness of these programmes. The participants included 117 parents who participated in 10 different parent education programmes organized by three different non-government organizations. The participants completed questionnaires on child behaviour problems and parenting stress both before and after programme participation. The results indicated that overall, the programmes were effective in reducing child behaviour problems and parenting stress. The effectiveness of the programmes were related to facilitator social work experience and qualifications, programme theoretical approach, age of target child, programme duration, length of individual programme sessions, as well as parents' time with target children. The results supported the potential for the establishment of a database for parent education programmes to map out possible factors affecting the effectiveness of parent education programmes.

## 摘要

本先導研究旨在驗證一些家長教育活動之成效，及發掘影響成效之因素。研究對象包括 117 位曾參與十項由三所不同非政府機構主辦的家長教育活動的家長。他們分別在活動進行前及活動完成後填答有關兒童行為問題及親職壓力的問卷。結果顯示，整體而言，家長教育活動能有效減少兒童問題行為及親職壓力。活動成效則與主持活動的社會工作員之社會工作經驗及學歷、活動之理念、目標兒童之年齡、活動節數及每節時間長短以及親子接觸時間有密切關係。本研究之結果顯示在香港建立一個家長教育活動成效資料庫，極有潛力為香港識別一些能促進家長教育活動成效的因素。

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## **Chapter 1: Introduction**

In the last decade, Hong Kong parents are becoming increasingly interested in acquiring new knowledge and techniques in bringing up their children. Since their inception in the 1980s, family life education and parent education have been gathering momentum, with increasing numbers of programmes and participants, and continuous improvement in programme quality. Into the 21<sup>st</sup> century, both service providers and users are more discerning in terms of the effectiveness and cost-effectiveness of the services and evidence-based service is receiving more attention. The commonly used practice of client satisfaction surveys falls short of providing convincing evidence on the effectiveness of the services. This paper reports the recent attempts in evidence-based research in parent education in Hong Kong.

### ***Parent education: definition and objectives***

In general terms, parent education is related to the parental attitudes, knowledge and skills needed for the promotion of the physical, cognitive and psychosocial development of children at different stages (Mahoney, Kaiser, & Girolametto, 1999; Winton, Sloop & Rodriguez, 1999). However, parenting and care giving can be affected by parental and family stress (Webster-Stratton & Taylor, 2001; Olds, 1988). It follows that parents may also need support in dealing with various issues in their personal lives which might impact on their parenting. From this perspective, parent education involves supporting parents to develop coping skills, communication skills, problem solving skills and their own personal development.

### ***Evaluation research***

Rigorous evaluation research is the basis of evidence-based practice. Patton (1997) points out that evaluation research is “the systematic application of social research procedures in assessing social intervention programmes” (p. 23), including systematic collection of data on programme content, implementation process, programme characteristics and effectiveness. The purposes of evaluation research are to evaluate the service, to improve the service effectiveness and to point out the future direction for development. Programme evaluation is not just the evaluation of the programme, but rather, it is the basis for service improvement and development.

In most research on the outcome or effectiveness of parent education programmes, the commonly used measures include child behaviour, and parent mental health (Barlow, 1998; Barlow & Coren, 2003; Nicholson & Sanders, 1999).

### ***Parent education in Hong Kong***

In Hong Kong, parent education service is mainly provided by the education, social welfare and health sectors (Chinese University of Hong Kong, 2002). The format includes public education through the mass media, talks, small group programmes, family life camps etc. The content includes parenting skills and management of child behaviour problems, with topics such as emotional intelligence and information technology becoming more and more popular recently. Attention is also being paid to services for special needs families such as single parent families and new immigrants.

Throughout the 20 years that parent education has been implemented in Hong Kong, many parent education programme materials have been developed by various organizations, and many different theoretical models or approaches are adopted. Behaviourist programmes (Martin & Pear, 1992; Sanders, 1999) are based on social learning theories and the focus is on teaching parents strategies to increase desirable behaviour and to reduce undesirable behaviour. Relationship programmes are based on humanistic, Adlerian, psychodynamic or family systems theories. Programmes such as Parent Effective Training (PET) emphasizes empathy and shared meanings in problem resolution, including skills such as active listening, sending “I-messages” etc. (Gordon, 1975). Programmes such as the Systematic Training for Effective Parenting (STEP) emphasizes helping parents understand the motives behind children’s behaviour and locating children’s problem behaviour within the context of family relationships (Dinkmeyer & McKay, 1976). The Satir Model on parent education is based on the therapeutic beliefs that intrapsychic barriers to parental involvement in nurturing child care originate from experiences in families of origin. Activities like family map exploration, metaphors of personal iceberg, and skills in empathy, rule-setting, and choice-making help to explore feelings, feelings about feelings, perceptions, expectations, yearnings and the self, and can ultimately deepen appreciation of children's behaviour. However, most locally developed programmes do not have a clear theoretical model and there is not much systematic evidence based research.

In terms of research, most programme organizers in Hong Kong used simple questionnaires to survey parents’ satisfaction level with regard to the timing, venue, format and content of the programme. There are only limited numbers of evaluation on the effectiveness of programmes and most of these outcome evaluation studies are limited to individual programmes, and the sampling includes only a limited number of participants. There are few studies comparing the effectiveness of different programmes and very few studies include a control or comparison group.



A more recent rigorous research on parent education programmes is the one conducted by the then Education Department and Department of Health on the Positive Parenting Programme (Leung, Sanders & Leung, 2002). In this study, there were 69 participants, randomly assigned to the intervention group and the control group, and the study investigated the effectiveness of the intervention in terms of family relationship, parenting attitudes and skills and child behaviour. The results indicated significant differences between the intervention group and the control group members in most post-intervention measures. The intervention group members reported lower child behaviour problems, lower dysfunctional discipline styles, and higher parenting sense of competence, at the post-intervention level, compared to the control group. Another study on the evaluation of the Universal Parent Education Programme for Parents of Primary School Children (親職學習多面體—小學篇) (Parent Education Implementation Team, Education and Manpower Bureau, 2003) used non-equivalent control group design, involving 52 parents in the intervention group and 32 parents in the control group. At post intervention, the intervention group parents reported significantly lower child problem behaviour and parenting stress than the control group parents (Parent Education Implementation Team, Education and Manpower Bureau, 2003). Apart from these, Cheung's (2001) study examined the effect of parent education programmes on the participants' marital relationship and parenting attitudes, but there was no information about the effect of the programmes on child behaviour. Furthermore, three other studies on individual parent education programmes were reported in the literature. They examined the effectiveness of a PET programme (Cheung & Yau, 1996), a STEP programme (Kwok, 1994), and a child management programme (Ho, Chow & Fung, 1999). Changes in parent-child interaction or parenting attitudes were observed for the first two programmes and changes in parent-child interaction and child behaviour were observed for the third programme. Besides, the second author and the Kwun Tong District Local Committee on Services for Young People and Kwun Tong District Council, together with various non-government organizations (NGOs) in the area implemented the "Home-school co-operation – parent child mediation" project and they would attempt to conduct evaluation on the parenting work with parents and adolescents in the area (Kwun Tong District Local Committee on Services for Young People and Kwun Tong District Council, 2001). However, the evaluation culture is not yet commonplace among the social service and welfare sectors and the results of the aforesaid study is still forthcoming.

Commissioned by the Board of Education, the Chinese University of Hong Kong completed an evaluation on the overall parent education service provision in 2002 (Chinese University of Hong Kong, 2002) and found that most parents were satisfied

with the service provision, though parent participation was being influenced by individual, family and social factors. However, there was no examination of the effectiveness of the programmes.

In terms of valid local research instruments, in Hong Kong, the Parenting Stress Index (Short Form) (PSI), a common measure of parent mental health, has been translated into Chinese and its validity has been established (Lam, 1999). The Eyberg Child Behaviour Inventory, a commonly used measure of child behaviour in parent education research (Barlow & Stewart-Brown, 2000), has also been translated into Chinese and its reliability and validity within the Hong Kong Chinese community have been established (Parent Education Implementation Team, Education and Manpower Bureau, 2003).

### ***Evaluation of the overall service***

The evaluation of individual programmes can only provide information about the effectiveness of individual programmes. A comprehensive review of different programmes with different formats and components, different theoretical assumptions, with different clients, will enable programme planners and policy makers to compare the effectiveness of different types of programmes with one another (MacLeod & Nelson, 2000). Research on the impact of contextual factors on the overall effectiveness of parent education programmes is also needed to map out the overall picture of parent education and to plan for its future directions. The contextual factors can include variations in programme lengths, teaching methods or facilitator experience.

Developing research on overall service evaluation is not a simple task. First, the support and participation of service providers are needed. The service providers would need to deploy staff workers to participate in meetings, data collection and processing and liaison etc. Staff support of research must be enlisted. Second, experienced researchers are needed to plan and co-ordinate the research design and process. Third, reliable and valid measurement instruments are needed. With the research on the validity of the Chinese version of various inventories, the time is ripe for the development of overall service evaluation in Hong Kong.

In June 2002, a meeting was held between representative of the Education and Manpower Bureau (EMB) (then Education Department), the University of Hong Kong (HKU) and three non-government organizations (NGOs) to discuss the long-term plans for the overall evaluation of Hong Kong parent education services. All parties recognized the importance of such research and decided to conduct the research in stages. The first stage was a pilot stage involving evaluation of the programmes conducted by three NGOs, and the results would set the direction for the

second stage. The Department of Health (DH) became formally involved in this project in 2003 as one of the investigators moved from EMB to DH. Specifically, the three NGOs were responsible for data collection and data entry. EMB funded the questionnaires and the Parent Education Programmes and was responsible for design of the research (principal investigator together with HKU) and the management of data collection, data entry and tidying up the dataset (associate investigator). DH and HKU (principal investigators) were responsible for data analysis and report writing.

In this first stage of evaluation, 10 programmes were evaluated. The foci included parenting attitudes and skills, communication skills, behaviour management skills, multiple intelligence, role of fathers or parents' emotion management. The format included small groups, and parenting college (lectures plus tutorial groups). There were at least four sessions<sup>1</sup> for each programme and the period of data collection was between September 2002 and June 2003. The details of the programmes are presented in Table 1.

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<sup>1</sup> Owing to unforeseen circumstances, some of the programmes had to be condensed from four to fewer sessions.

Table 1

## Organization and programme information

Organization	Course theme	Number of sessions	Theoretical background	Format
1	Parenting skills	2-4	PET	Group
	Parenting skills	2-4	PET	Group
	Parenting skills	2-4	PET	Group
	Parenting skills	2-3	PET	Group
2	Parent effectiveness training	5	PET	Group
	Parenting for fathers	4	Satir	Group
	Multiple intelligence	4	Eclectic	Parenting college
	Spiritually rich parents	5	Others	Group
3	Successful parenting college (primary)	6	Eclectic	Parenting college
	Successful parenting college (secondary)	5-6	Eclectic	Parenting college
	Parent-child communication	4	Satir	Group
	Parent support	No information	No information	Group

## Chapter 2: Method

### *Participants*

The participants included 201 parents recruited by the three NGOs and the target children included pre-school, primary school and secondary school children. In the majority of cases, parents volunteered to enrol for the programmes but in four secondary schools, all parents of secondary one or two students were given the Parenting Sense of Competence Scale (Gilbaud-Wallston & Wandersman, 1978) and parents requiring support in parenting (as revealed by low scores on the scale) were invited to participate.

Of these 201 participants, 118 completed all the questionnaires (see measures section) but in one case, the age of the target child was outside the age range for one of the questionnaires (see measures section) and this case was excluded from analysis. The analysis in this report was based on 117 participants (23 fathers, 94 mothers). The mean ages of the fathers and mothers were 44.33 years old ( $SD = 6.86$ ) and 39.66 years old ( $SD = 4.59$ ) and the mean length of residence in Hong Kong of fathers and mothers were 36.17 years ( $SD = 10.62$ ) and 29.46 years ( $SD = 16.78$ ). In terms of family status, there were 88 (75.2%) nuclear families, 20 extended families (17.1%), 5 single families (4.3%) and 3 step families (2.6%) and one participant did not supply information on this aspect. For participants' marital status, 112 (95.7%) were married; 3 (2.6%) were divorced and 2 (1.7%) were widowed.

There were 13 families on Comprehensive Social Security Assistance (CSSA). There were two participants (1.7%) with monthly family income below \$4,999, 15 (12.8%) with monthly family income between \$5,000 to \$9,999, 41 (35.0%) with monthly family income between \$10,000 to \$19,999, 19 (16.2%) with monthly family income between \$20,000 to \$29,999, 13 (11.1%) with monthly family income between \$30,000 to \$39,999, and 27 (23.1%) with monthly family income above \$40,000. Information about parent employment and education are shown in Table 2.

In terms of the target children, there were 15 kindergarten students (mean age = 3.78 years,  $SD = 1.09$ ; mean length of residence in Hong Kong = 3.76 years,  $SD = .99$ ), 32 primary students (mean age = 8.18 years,  $SD = 3.45$ ; mean length of residence in Hong Kong = 8.03 years,  $SD = 1.63$ ), and 70 secondary students (mean age = 12.87 years,  $SD = 1.01$ ; mean length of residence in Hong Kong = 10.73 years,  $SD = 3.45$ ). There were 78 male target children (8 kindergarten students, 24 primary students and 46 secondary students) and 39 female target children (7 kindergarten students, 8 primary students and 24 secondary students). For childcare arrangements, 74 (63.2%) of the target children were cared for by their parents, 22 (18.8%) by

domestic helpers, 10 (8.5%) by grandparents, 2 (1.7%) by paid childcare, and 1 (0.9%) by relatives; and there were 8 participants who did not supply information on childcare arrangement.

Table 2

Parent employment and education

	Father		Mother	
	<i>N</i>	%	<i>N</i>	%
<b>Employment</b>				
Professional	26	22.2	8	6.8
Management	23	19.7	11	9.3
Clerical	6	5.1	21	17.9
Skilled	25	21.4	3	2.6
Unskilled	9	7.7	11	9.4
Home duties	1	0.8	53	45.3
Unemployed	4	3.4	4	3.4
Retired	2	1.7	0	0
Others	8	6.8	6	5.1
<b>Education</b>				
Postgraduate	9	7.7	1	0.9
University	13	11.1	8	6.8
Tertiary	9	7.7	8	6.8
Diploma	3	2.6	3	2.6
Matriculation	10	8.5	10	8.5
Upper secondary	24	20.5	37	31.6
Lower secondary	31	26.5	30	25.6
Primary or below	14	12.0	20	17.1

**Measures**

There were two components, focusing on the participants and the facilitators respectively. The first component consisted of three parts to be completed by the participants (demographic information, Eyberg Child Behaviour Inventory, and Parenting Stress Inventory). The second component consisted of a questionnaire to be completed by the facilitators.

Demographic information – this included basic information such as age, sex, education, occupation and childcare arrangement etc. The participants had to complete this questionnaire only before they started the programme.

Eyberg Child Behaviour Inventory (ECBI) (Eyberg & Ross, 1978) – the ECBI

was a 36-item measure of parent perception of disruptive behaviour in children aged 2 to 16. There were two scores that could be calculated. The first was a problem score which was a measure of the frequency of occurrence of disruptive behaviours. The second was an intensity score which was the sum of parents' rating of the intensity of the behaviours on a 7-point scale. Participants completed this inventory both before and after completion of the parent education programme.

Parenting Stress Inventory (PSI) – short form (Lam, 1999) – this was a 36-item questionnaire consisting of three factors: Parental Distress (PD) measuring an impaired sense of parental competence and depression, Parent-Child Dysfunctional Interaction (PCDI) measuring unsatisfactory parent-child interaction, and Difficult Child (DC) measuring behavioural characteristics of the child. Most of the items were measured on a five-point scale ranging from 1 (strong agreement) to 5 (strong disagreement). All but three of the items (14, 22, 33) were reverse scored. High scores indicated higher difficulties. In this study, only the first two factors (24 items) were included as there was some overlap between DC and ECBI because both measured child behaviour problems. Participants completed this inventory both before and after completion of the parent education programme.

Facilitator and programme information – this included information on the facilitators' qualifications and experiences, programme content, format and theoretical framework. This part was completed by the facilitators.

### ***Procedures***

In two participating NGOs, participants were recruited through the normal recruiting procedures, including posters, pamphlets, information bulletin and newspaper, or through mass media. With the other NGO, four secondary schools responded to the recruitment invitation and in each school, a level (Secondary one or two) was selected. In each selected level of each participating school, as mentioned before, the Parenting Sense of Competence Scale was administered to parents of all students. Parents with the bottom 20% scores in each school were invited to participate in the parent education programme. They were randomly divided into the intervention group and the control group within each school. In the present report, only the intervention group data was included.

In all cases, participants were requested to complete the pre-intervention questionnaires prior to programme participation. They were also requested to complete the post-intervention questionnaires within two weeks upon programme completion.

A common data entry file and coding system were prepared for the three participating NGOs. Training on data entry and coding, prior to programme

commencement, was conducted for two NGOs, upon their request. The completed data files were then sent to the investigators for data analysis.

### ***Data analysis***

There were two main aspects. First, evaluation of the overall effectiveness of parent education programmes were examined using dependent t tests to compare the pre and post programme scores of participants in terms of parenting stress and child behaviour. Second, Multivariate Analyses of Covariance (MANCOVA), dependent t tests and correlations were used to examine factors influencing the effectiveness of programmes, including facilitator background, theoretical framework, programme format, number of sessions, and participant background (e.g., family status, education, occupation, childcare arrangement, etc.).



## Chapter 3: Results

### *Comparison between participants with complete and incomplete data*

A series of chi square tests and independent t tests were conducted to examine possible differences between participants with complete ( $n = 117$ ) and incomplete data ( $n = 83$ ). There were more participants on CSSA among those with complete data ( $n = 13$ ) than those with incomplete data ( $n = 2$ ),  $\chi^2(1, N = 194) = 4.62, p < .05$ . There was also a significant difference between participants with complete and incomplete data in terms of target child's educational level,  $\chi^2(2, N = 192) = 7.52, p < .05$ . There were more participants with complete data with target children at secondary level ( $n = 70$ ) than those with incomplete data ( $n = 32$ ). There were significant differences between the two groups in terms of father's age,  $t(183) = -2.13, p < .05$ , and target child's age,  $t(191) = -2.97, p < .005$ . The fathers in the complete data group ( $M = 44.33, SD = 6.86$ ) were older than those in the incomplete data group ( $M = 42.16, SD = 6.35$ ). The target children in the complete data group ( $M = 10.42, SD = 3.47$ ) were older than those in the incomplete data group ( $M = 8.79, SD = 4.06$ ). These differences in ages were probably related to the higher number of target children at secondary level among participants with complete data.

There was no difference between the two groups in terms of the pre-intervention scores on the various questionnaires. However, there was a significant difference between the two groups in terms of post-intervention PSI-PD scores,  $t(169) = -2.60, p = .01$ . Participants with incomplete data reported higher scores ( $M = 36.16, SD = 6.48$ ) than those with complete data ( $M = 33.01, SD = 7.90$ ).

### *Reliability estimates*

The reliability estimates (Cronbach Alpha) of the scale-type questionnaires are presented in Table 3. The estimates were above .7 for all questionnaires.

Table 3

Reliability estimates

	Pre-intervention	Post-intervention
ECBI-intensity	.94	.93
ECBI-problem	.92	.93
PSI-PD	.84	.88
PSI-PCDI	.77	.80

### *Overall effectiveness of programmes*

The overall effectiveness of the programmes was measured in terms of changes in pre- and post-intervention scores of the child behaviour and parenting stress

measures. The statistical technique used was dependent t test. The results indicated significant differences for ECBI-problem,  $t(116) = 3.22, p < .005$ , PSI-PD,  $t(116) = 2.69, p < .01$ , and PSI-PCDI,  $t(116) = 3.81, p < .001$ , indicating reduction in child behaviour problem and parenting stress after programme participation. The mean and standard deviation scores are shown in Table 4.

Table 4

Mean and standard deviation child behaviour and parenting stress scores

	Pre-intervention	Post-intervention	Significance
ECBI-intensity	113.33 (28.50)	110.27 (22.98)	<i>ns</i>
ECBI-problem	9.38 (7.87)	7.68 (7.78)	<.005
PSI-PD	34.53 (7.97)	32.94 (7.81)	<.01
PSI-PCDI	32.18 (6.54)	30.32 (6.16)	<.001

### ***Facilitator background and programme effectiveness***

The relationship between facilitator background and programme effectiveness was investigated through six separate MANCOVAs. There were two sets of dependent variables. The first set included post-intervention ECBI-intensity and ECBI-problem and the second set included post-intervention PSI-PD and PSI-PCDI. There were two corresponding sets of covariates, namely, pre-intervention ECBI-intensity and ECBI-problem for the first set and pre-intervention PSI-PD and PSI-PCDI for the second set. The independent variables in the MANCOVAs were facilitator qualifications with three levels (Master of Social Work, Bachelor of Social Work, Diploma in Social Work/others), facilitator social work experience with two levels (4 years or less, 5 years or more)<sup>2</sup> and facilitator parent education experience with two levels (4 years or less, 5 years or more).

### ***Facilitator qualification.***

MANCOVA results indicated that there was a significant effect of facilitator qualifications on parenting stress,  $F(4, 218) = 3.74, p < .01$ . Univariate F tests indicated that there was a significant difference in post-intervention PSI-PD ( $p < .005$ ). MANCOVA results indicated no significant difference in child behaviour measures by facilitator qualifications. When the three qualification levels were analyzed separately, using dependent t tests, there were significant pre- and post-intervention scores on ECBI-problem, PSI-PD and PSI-PCDI scores for the Master of Social Work (MSW) group and Bachelor of Social Work (BSW) group but not for the Diploma of Social Work/others (DipSW) group. The mean and standard deviation scores and

<sup>2</sup> None of the social work assistants had more than 4 years' experience in social work.

the dependent t test results are shown in Table 5.

Table 5

Pre- and post-intervention scores by facilitator qualifications.

	MSW ( <i>n</i> = 27)	BSW ( <i>n</i> = 76)	DipSW ( <i>n</i> = 11)
Pre-intervention ECBI-intensity	106.30 (19.95)	118.59 (29.06)	92.91 (30.64)
Post-intervention ECBI-intensity	102.70 (16.33)	114.64 (23.26)	96.82 (30.46)
Dependent t test results	<i>ns</i>	<i>ns</i>	<i>ns</i>
Pre-intervention ECBI-problem	6.67 (5.73)	11.22 (8.13)	3.73 (7.36)
Post-intervention ECBI-problem	4.74 (5.45)	8.92 (8.13)	6.64 (9.19)
Dependent t test results	<i>t</i> (26) = 2.57, <i>p</i> < .05	<i>t</i> (75) = 3.61, <i>p</i> = .001	<i>ns</i>
Pre-intervention PSI-PD	31.26 (7.16)	35.87 (8.24)	34.36 (6.76)
Post-intervention PSI-PD	28.00 (6.62)	34.30 (7.32)	36.27 (9.65)
Dependent t test results	<i>t</i> (26) = 3.59, <i>p</i> = .001	<i>t</i> (75) = 2.04, <i>p</i> < .05	<i>ns</i>
Pre-intervention PSI-PCDI	30.96 (6.58)	32.20 (6.75)	34.27 (5.02)
Post-intervention PSI-PCDI	28.98 (6.58)	30.14 (5.89)	34.45 (6.12)
Dependent t test results	<i>t</i> (26) = 2.15, <i>p</i> < .05	<i>t</i> (75) = 3.31, <i>p</i> = .001	<i>ns</i>

***Facilitator social work experience.***

MANCOVA results also indicated a significant difference in parenting stress due to facilitator social work experience,  $F(2,109) = 3.60, p < .05$ . Univariate F tests indicated that there was a significant difference in post-intervention PSI-PCDI ( $p < .01$ ). MANCOVA results indicated no significant difference in child behaviour measures by facilitator social work experience. When the two groups were analyzed separately using dependent t tests, the results indicated significant pre- and post-intervention changes for all child behaviour measures and parenting stress measures for the more experienced (5 years or more) group but no significant pre- and

post-intervention changes for the less experienced (4 years or under) group. The mean and standard deviation scores and the dependent t test results are shown in Table 6.

Table 6

Pre- and post-intervention scores by facilitator social work experience

	4 years or less ( $n = 20$ )	5 years or more ( $n = 94$ )
Pre-intervention ECBI-intensity	105.10 (29.77)	114.93 (27.95)
Post-intervention ECBI-intensity	104.65 (24.36)	111.26 (22.48)
Dependent t test results	<i>ns</i>	$t(93) = 1.99, p < .05$
Pre-intervention ECBI-problem	6.75 (8.37)	9.99 (7.80)
Post-intervention ECBI-problem	7.75 (9.07)	7.70 (7.60)
Dependent t test results	<i>ns</i>	$t(93) = 4.29, p < .001$
Pre-intervention PSI-PD	32.80 (8.50)	35.02 (7.93)
Post-intervention PSI-PD	33.05 (7.92)	32.99 (7.91)
Dependent t test results	<i>ns</i>	$t(93) = 2.91, p = .005$
Pre-intervention PSI-PCDI	32.65 (5.31)	31.99 (6.83)
Post-intervention PSI-PCDI	32.90 (7.22)	29.73 (5.85)
Dependent t test results	<i>ns</i>	$t(93) = 4.14, p < .001$

***Facilitator parent education experience.***

MANCOVA results indicated no significant child behaviour and parenting stress differences by facilitator parent education experience.

***Programme issues and programme effectiveness***

***Programme theoretical framework.***

Two MANCOVAs were used to examine the effect of programme theoretical framework on child behaviour and parenting stress measures. In this case, the programme with “others” approach was excluded as there were only two participants with complete data in this programme. The independent variable in both MANCOVAs was programme theoretical framework with three levels (PET, Satir and eclectic). The dependent variables in the two MANCOVAs were the post-intervention child behaviour (ECBI problem and intensity) and parenting stress (PSI-PD and PSI-PCDI) measures and the covariates were the respective pre-intervention measures. The results indicated a significant main effect of programme theoretical framework on parenting stress,  $F(4, 204) = 2.84, p < .05$ . Univariate F tests indicated that there was a significant difference in post-intervention PSI-PCDI ( $p < .05$ ). MANCOVA results indicated no significant difference in child behaviour by programme theoretical framework. When the three theoretical

frameworks were analyzed separately using dependent t tests, there were significant pre- and post-intervention differences in child behaviour and parenting stress for eclectic programmes, and there were pre- and post-intervention differences in child behaviour for programmes adopting the “Satir” approach. There was a significant difference in pre- and post-intervention PSI-PD for PET programmes. However, it should be noted that there were only 8 participants participating in “Satir” type programmes. The mean and standard deviation scores are shown in Table 7.

Table 7

Pre- and post-intervention scores by programme theoretical framework

	PET ( <i>n</i> = 55)	Satir ( <i>n</i> = 8)	Eclectic ( <i>n</i> = 44)
Pre-intervention ECBI-intensity	98.94 (24.97)	134.00 (28.08)	124.11 (23.91)
Post-intervention ECBI-intensity	101.51 (22.56)	120.75 (21.08)	116.80 (20.90)
Dependent t test results	<i>ns</i>	<i>t</i> (7) = 2.73, <i>p</i> < .05	<i>t</i> (43) = 4.42, <i>p</i> < .001
Pre-intervention ECBI-problem	6.91 (7.09)	11.25 (9.25)	11.68 (7.83)
Post-intervention ECBI-problem	7.05 (7.46)	6.13 (7.12)	8.52 (8.47)
Dependent t test results	<i>ns</i>	<i>t</i> (7) = 5.00, <i>p</i> < .005	<i>t</i> (43) = 4.55, <i>p</i> < .001
Pre-intervention PSI-PD	34.93 (7.40)	33.00 (8.14)	34.07 (8.42)
Post-intervention PSI-PD	33.04 (7.76)	31.75 (4.95)	32.89 (8.68)
Dependent t test results	<i>t</i> (54) = 2.05, <i>p</i> < .05	<i>ns</i>	<i>ns</i>
Pre-intervention PSI-PCDI	32.98 (5.27)	29.13 (10.26)	31.86(7.11)
Post-intervention PSI-PCDI	32.20 (5.77)	28.13 (6.75)	28.77 (6.39)
Dependent t test results	<i>ns</i>	<i>ns</i>	<i>t</i> (43) = 4.66, <i>p</i> < .001

***Programme format.***

MANCOVAs results indicated no significant difference in child behaviour and parenting stress by programme format (group versus parenting college).

### ***Number of sessions and session length.***

Correlational techniques were used to examine the relationship between session number and session length, on the one hand, and programme effectiveness, in terms of changes in pre and post-intervention child behaviour and parenting stress measures, on the other hand. Four new variables on pre- and post-intervention changes were calculated, by subtracting the post-intervention scores from the pre-intervention scores of ECBI-intensity, ECBI-problem, PSI-PD and PSI-PCDI. For each new variable, higher scores indicated bigger pre- and post-intervention difference. The results indicated that the number of sessions was positively correlated with the pre and post-intervention differences, the higher the number of sessions, the greater the pre- and post-intervention differences. However, session duration was negatively related to pre- and post-intervention differences, the longer the duration, the smaller the pre- and post-intervention differences. The session numbers ranged from 2 to 6 and the session duration ranged from 1.5 hours to 7.5 hours. The correlation coefficients are shown in Table 8.

Table 8

Correlation between programme length measures and pre- and post-intervention differences in child behaviour and parenting stress measures

	Session number	Session duration
Pre- and Post-intervention difference in ECBI-intensity	.24*	-.30***
Pre- and Post-intervention difference in ECBI-problem	.26**	-.29***
Pre- and Post-intervention difference in PSI-PD	.08	.12
Pre- and Post-intervention difference in PSI-PCDI	.21*	-.17

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .005$

### ***Participant background***

#### ***Educational level of target child.***

Two MANCOVAs were used to examine the effect of target child educational level on the child behaviour and parenting stress measures. The independent variable in both MANCOVAs was target child educational level with three levels (kindergarten, primary and secondary). The dependent variables in the two MANCOVAs were the post-intervention child behaviour (ECBI problem and intensity) and parenting stress (PSI-PD and PSI-PCDI) measures and the covariates were the respective pre-intervention measures. The results indicated a significant

main effect of target child educational level on parenting stress,  $F(4, 224) = 3.97, p < .005$ . Univariate F tests indicated that there was a significant difference in post-intervention PSI-PCDI ( $p < .05$ ). MANCOVA results indicated no significant difference in child behaviour by target child educational level. When the three target child educational levels were analyzed separately using dependent t tests, the results indicated significant changes in child behaviour among target children of kindergarten level, significant changes in child behaviour and parenting stress among target children of primary level, and significant changes in parenting stress among target children of secondary level. The mean and standard deviation scores are shown in Table 9.

Table 9

Pre- and post-intervention scores by educational level of target child

	Kindergarten ( $n = 15$ )	Primary ( $n = 32$ )	Secondary ( $n = 70$ )
Pre-intervention ECBI-intensity	138.07 (17.77)	128.06 (15.97)	101.30 (24.85)
Post-intervention ECBI-intensity	129.07 (14.76)	118.28 (21.12)	102.57 (21.82)
Dependent t test results	$t(15) = 2.41,$ $p < .05$	$t(31) = 4.48,$ $p < .001$	<i>ns</i>
Pre-intervention ECBI-problem	12.53 (8.41)	13.28 (8.47)	6.93 (6.49)
Post-intervention ECBI-problem	8.80 (10.12)	10.00 (7.90)	6.37 (6.95)
Dependent t test results	$t(15) = 3.19,$ $p < .01$	$t(31) = 3.95,$ $p < .001$	<i>ns</i>
Pre-intervention PSI-PD	34.93 (7.06)	35.63 (9.92)	33.94 (7.18)
Post-intervention PSI-PD	34.67 (5.82)	34.31 (8.74)	31.94 (7.68)
Dependent t test results	<i>ns</i>	<i>ns</i>	$t(69) = 2.64,$ $p = .01$
Pre-intervention PSI-PCDI	28.60 (6.83)	32.56 (7.58)	32.77 (5.78)
Post-intervention PSI-PCDI	27.73 (4.33)	28.84 (6.51)	31.56 (6.07)
Dependent t test results	<i>ns</i>	$t(31) = 4.31,$ $p < .001$	<i>ns</i>

***Sex of target child.***

MANCOVA results indicated no significant effect of sex of target child on child behaviour and parenting stress measures.

***Others.***

MANCOVA results indicated that there was no significant effect of parents' education, family income, working status of mother, day carer for target child, and relationship of programme participant to target child on child behaviour and parenting stress measures. Correlations between parents' time with target child and pre- and post-intervention differences in child behaviour and parenting stress measures indicated a positive relationship between mother's time with target child and changes in child behaviour. The correlation coefficients are shown in Table 10.

Table 10

Correlations between parents' time with target children and differences in pre- and post-intervention child behaviour and parenting stress measures

	Father	Mother
Pre- and Post-intervention difference in ECBI-intensity	.12	.19*
Pre- and Post-intervention difference in ECBI-problem	-.01	.21*
Pre- and Post-intervention difference in PSI-PD	-.11	-.11
Pre- and Post-intervention difference in PSI-PCDI	.01	.04

\*  $p < .05$



## Chapter 4: Discussion

The present study is a pilot study to examine the feasibility of the establishment of a parent education database. The initial results are encouraging and they indicate that overall, parent education programmes are effective in terms of reducing child behaviour problems and parenting stress. The results also suggest that the qualifications and social work experience of parent education facilitators, the theoretical framework of the programme, the number of sessions and the duration of sessions, parents' time with target children, as well as the educational levels (or age range) of target children are factors influencing the effectiveness of the programmes.

However, at this stage, it is also important to point out the limitations of the present study. First, the dataset is still small, comprising 10 programmes from 3 NGOs, and they are not representative of the parent education programmes conducted and the sample size is relatively small. As such, results may be affected by scores of particular groups, and the results should be interpreted with caution. For example, some programmes were conducted for families selected because of severe parenting difficulties. Second, with the small dataset, it is not possible to examine possible interactions. For example, are programmes of a particular theoretical framework more effective for a particular target child age group? With a larger database, it will be possible to examine these patterns. Third, a considerable number of participants had not completed all questionnaires and they were not included in the present analysis. Though there were no differences in pre-intervention scores or systematic differences in demographic profiles between these participants and those included in the analysis, the present sample might still represent participants who were more conscientious and supportive of the programmes. Fourth, in some cases, the cell sizes are relatively small and the results should be interpreted with caution. Finally, though there were significant correlations between variables such as programme session number and session length with pre- and post-intervention changes in outcome measures, it is possible that the relationship may not be a linear one. This should be further investigated with a larger dataset and a wider range of variable values.

The present pilot study, however, does support the potential for a parent education database. The pilot results point to possible patterns affecting the effectiveness of programmes. With a larger dataset, more analyses could be performed and the results would be less affected by sampling or random errors. The information should substantially benefit service providers in pointing to directions for more effective service provisions, programme development and staff training.

Into the 21<sup>st</sup> century, evidence based parent education research is developing rapidly in Hong Kong. Through examination of factors affecting the relative effectiveness of programmes, a macro view can be obtained and an overall direction can be set. Through the collaboration of various sectors, a platform for comparison and follow-up research could be established, and, with concerted efforts, to build up parent education programmes that can meet the needs of Hong Kong parents.

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