



RESEARCH REPORT

What Makes an Effective Early Childhood Parenting Programme: a Systematic Review of Reviews and Meta-analyses

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1. ABSTRACT

The widely acknowledged importance of educating parents in children's early years has led to a substantial number of parenting programmes aimed at various aspects of early childhood care and education (ECEC). A vast amount of research has been conducted to evaluate the effectiveness of existing parenting programmes. By synthesising the research evidence, this study seeks to address the questions of whether early childhood parenting programmes are effective in improving parenting and enhancing children's development; and which factors of the programme design and implementation contribute to the successful outcomes of parenting programmes. A systematic search of bibliographic databases for reviews and meta-analyses of existing early childhood parenting programmes in the past ten years (2010-2020) was conducted through ProQuest, Ovid and EBSCOhost. Forty-seven review studies are eligible for inclusion. A thematic approach is adopted to synthesise the findings of reviews and meta-analyses. Overall, short-term positive effects on the various parent outcomes measured by the programmes have been reported with small to medium effect size across reviews. But the positive programme effects on parents do not guarantee improvement in children's development as mixed results are reported regarding the children's outcomes. Evidence of long-term effects has been far from conclusive due to the paucity of empirical research as well as the inconsistent results within the existing literature, suggesting more studies are needed to address this gap. Evidence of programme effectiveness is discussed with reference to theoretical frameworks, programme length/intensity, delivery modes, family-centred approach (*incl.*, father-inclusiveness) and cultural adaptation. Based on the research evidence, a list of practical suggestions is proposed in order to improve the design, implementation and evaluation of early childhood parenting programmes.

Keywords: parenting programme, early childhood, effectiveness, systematic review

2. EXECUTIVE SUMMARY

2.1 Background

Early childhood years are fundamental to children's development, during which period parents (and/or other primary carers) play a crucial role in the care and education of children (Britto et al., 2015). How to better support parents during this period is a question of public interest. A variety of parenting programmes have been developed around the world in order to improve positive parenting and promote children's development in early years. To evaluate these parenting programmes, a vast amount of empirical research, such as randomised control trials, has been conducted. The research evidence sheds light on the different extent of effectiveness of different early childhood parenting programmes. It is of paramount importance to understand what makes an effective parenting programme for parents of young children.

Based on the results of empirical research, literature reviews and meta-analyses have been carried out to synthesise the evidence. These reviews, be it quantitative (*e.g.*, meta-analysis) or qualitative (*e.g.*, narrative synthesis), have provided considerable insight into the existing parenting programmes. One issue remaining is that these reviews have different focuses, making it difficult to gain a comprehensive overview of the elements that affect programme effectiveness. A synthesis of the review findings can address the knowledge gap and contribute to a better understanding of how to refine programme design and implementation to maximise effectiveness. Therefore this study seeks to integrate the research evidence based on existing literature reviews and meta-analyses of parenting programmes in early childhood years.

2.2 Review focus

This study focuses on the programmes aimed at parents of children aged from birth to 6 years old who do not have special education needs and disability. We use parenting programme as an umbrella term for interventions, training courses, educational programmes and alike which have the aim of supporting parenting.

The review seeks to answer the following two research questions:

- How effective are early childhood parenting programmes in improving parenting and enhancing children's development?
- Which factors of the programme design and implementation contribute to the successful outcomes of parenting programmes?

2.3 Methodology

We conducted a systematic review of literature reviews and meta-analyses of early childhood parenting programmes. Literature search of bibliographic databases was conducted through ProQuest, Ovid and EBSCOhost yielded. The included studies are peer-reviewed English literature reviews and meta-analyses of universal parenting programmes for parents of typically developing children aged 0-6 years, which were published in the past ten years (2010-2020).

The framework of Pascal, Bertram and Peckham (2018) was used in quality assessment of included studies (*i.e.*, relevance of the study to the research questions; conceptual/theoretical framing; methodological rigour, transparency and ethics; and reliability, validity and trustworthiness of the findings). As a result, 47 studies are included in the data extraction and the synthesis of findings.

A thematic approach was adopted to code the findings of included review studies in relation to the research questions. The final themes with corresponding sub-themes were used to address the two research questions.

2.4 Main findings

1. Overall, evidence suggests that a parenting programme can be an effective way of supporting parenting in early childhood years. Short-term positive effects with small to medium effect sizes have been reported on a variety of parent outcomes, including knowledge of parenting, parenting behaviours, parents' mental health, couple relationship quality, parental attitudes and self-beliefs.
2. There is evidence that parenting programmes can result in a significant improvement in young children's physical health, behavioural, cognitive and socio-emotional development. Nevertheless, some evidence suggests that the positive effects that programmes can have on parents do not necessarily lead to better children's development.

3. A scarcity of evidence exists regarding the long-term effects of parenting programmes on either parents and children's development.
4. Programme effectiveness is affected by theoretical frameworks, programme length/intensity, delivery modes (*i.e.*, group-based, individual-based and online formats) and cultural adaptation (if any).
5. A family-centred approach, especially father-inclusiveness in parenting programmes, is recognised as a noticeable feature of effective programmes, which has drawn increasingly more attention from early years scholars and professionals.

2.5 Practical suggestions

Based on the findings, we propose a list of practical suggestions about the design and implementation of early childhood parenting programmes in order to enhance effectiveness. The following features are shown to be beneficial to successful outcomes of parenting programmes:

- having a good 'fit' between the chosen theoretical framework(s) and the programme aims/purposes (*e.g.*, the parents' needs)
- adopting an empowering approach to programme design and implementation (*i.e.*, focusing on empowering parents and being inclusive and non-judgmental throughout the programme)
- ensuring parents have a good understanding of the theoretical background (*incl.* theory of change) and the rationale behind the programme
- following a needs-based approach to decide programme length and intensity (*i.e.*, allowing adequate time for change without causing extra burden or stress for parents)
- combining different delivery modes (*i.e.*, making use of the advantages of each format)
- including web- or mobile-based online resources and remote learning elements in the programme, especially for providing ongoing support
- being led by well-trained professionals, who are known to/trusted by parents
- adopting a family-centred approach to encourage parents and other carers to actively engage in the programme either through direct or indirect participation

- having father-inclusive/father-friendly programme content and teaching process which are implemented with caution to avoid reinforcing gender stereotypes in parenting
- including parent-child activities when appropriate
- being adapted to embrace cultural values in local contexts, which is guided by empirical evidence with consideration given to practical issues, such as cost, feasibility and other resources
- including local communities and stakeholders in the process of cultural adaptation
- keeping improving programme cultural sensitivity based on parents' feedback throughout the programme

2.6 Relevance to China

Parent education is a key topic of the 14th Five-Year Plan (2021-2025) for Major Educational Reforms of the Chinese government. By drawing on the international experience of early childhood parenting programmes, we highlight the following recommendations for developing effective educational programmes for Chinese parents of young children.

1. A family-centred approach is recommended for parent education from (or even before) the birth of a child. Research evidence shows that interventions involving only one parent can introduce new family conflicts as the other family members may have contradictory parenting ideas or behaviours. In many Chinese families, grandparents are involved in the care of new-birth and young children. Generation gap in parenting ideology and practice is an ongoing issue that needs to be addressed. While parent education recognises parents as the key caretakers, the whole family should be targeted in programme design to ensure consistent parenting among care-takers, across time and situations. Programme contents that account for family dynamics can be useful, for example, guidance on how to deal with child-rearing-related conflicts between parents and grandparents, programme materials that can be shared with family members and support for indirect participation (*i.e.*, one caretaker is directly enrolled in the programme while other caretakers in the family will obtain ongoing debriefing and instruction from the enrolled care-taker). Chinese families tend to have close relationships. Therefore it is of particular importance to adopt a family-centred approach in the development and implementation of parent education.

2. Parent education should tackle the existing gender stereotypes and the absence of fathers' engagement in young children's care and education. Mothers are still considered as the main caretaker of children in the Chinese society. Nevertheless, fathers' involvement in children's care and education is gaining more and more attention from the public (*e.g.*, the very popular Reality TV Show "Where Are We Going? Dad"). However, the stereotypical role of fathers (*e.g.*, only responsible for disciplining/educating/playing with children, *etc.*) shall be challenged in parent education. Research evidence suggests that improvement in co-parenting is beneficial to both parents and children. Therefore parent education should seek to involve more fathers. Research evidence shows these strategies can promote fathers' engagement in parent education: *i)* developing father-inclusive contents; *ii)* using male facilitators; *iii)* providing relevant professional training; and *iv)* creating a father-friendly environment for learning.
3. Along with the increasing global communication and knowledge exchange in education, attempts have been made to adapt some international parenting programmes for use among Chinese parents (*e.g.*, the Triple P). Research evidence suggests that parenting programmes developed for parents in 'western' countries cannot be readily applied to Chinese parents. Several issues are identified, including sociocultural differences in the theories of behaviour change, different needs of parents and the divergence between Chinese and 'western' parenting ideology and practice (*e.g.*, what is considered to be good parenting; parenting goals; parenting attitudes and so on). Careful cultural adaptation of 'imported' parenting programme is required to ensure effectiveness, including surface adaptation (*e.g.*, translation of materials) and deep adaptation (*e.g.*, modifications made to content and teaching methods). The following strategies are recommended based on research evidence in order to improve cultural sensitivity of 'borrowed' parenting programmes: *i)* incorporating Chinese cultural values and child-rearing traditions into the adapted programmes; *ii)* adding discussions and reflection on cultural comparison to the professional training of facilitators; *iii)* involving Chinese early childhood scholars, practitioners, parents and even young children in the process of adaptation; *iv)* attending to Chinese parents' needs which are informed by empirical evidence rather than assumptions. Considering the issues related to 'borrowing' existing programmes developed in 'western' contexts, we recommend that locally developed educational programmes based on research evidence can generate more promising outcomes for Chinese parents and young children.

4. How to scale up universal parent education in a cost-effective way is of great interest to Chinese policy-makers. One solution of great potential is online parent education, thanks to the rapid advancement in technology and Internet. According to the research evidence, the identified advantages of online parenting programmes (*incl.* self-guided, expert-guided and mobile-app-based) include the convenience, flexibility and mobility in access, a wider geographical reach, as well as a larger number, of parents at limited costs, providing on-going support for a prolonged time and enabling tailored support based on individual progress. Considering the prevalence of using Internet to search information among the new generation of Chinese parents, we recommend speeding up the development of web- or mobile-based online parent education. As there are relatively limited empirical studies on online parent education, we propose to carry out evaluative research on the design and implementation of online programmes for Chinese parents in order to gain a better understanding of how to provide high-quality child-rearing support through the Internet.

Nonetheless, it is important to point out that online education is not suitable for parents in rural areas and low-income households, who have limited or no resources for digital learning. Therefore traditional face-to-face formats (*e.g.*, home visits by professionals) are more appropriate for these parents. Given the large urban-rural gap in Chinese ECEC, we recommend directing more resources to supporting families in rural areas, especially the family education of young 'left-behind' children.

5. One recent public survey ("Children's growth, parents' anxiety---2019 Growth Anxiety White Paper") shows that 91.5% of the Chinese parents who participated in the survey feel anxious about child-rearing issues. The pressure of 'being a good parent' comes from both within the family and the wider society. Research evidence shows that parents' psychological wellbeing has a profound impact on children's development. Therefore it is meaningful and beneficial to include knowledge and skills of parental self-care in parent education. In addition, evidence shows that a non-judgmental learning environment promotes engagement of parents. To avoid causing parental anxiety in parent education, we argue against an over-emphasis on standardised assessment of parenting which may overlook the characteristics of each family. Instead, an empowering approach, which encourages self-evaluation and reflection, is recommended in parent education.

Based on the findings of this review, we have developed two checklists (see appendix) to support the development of Chinese parent education programmes and the cultural adaptation of 'borrowed' parenting programmes, respectively.

3. INTRODUCTION

Positive parenting can promote children's development and wellbeing. The question of how to educate parents and supporting parenting is of great interest to policy makers, education practitioners, researchers as well as parents. A variety of parenting programmes have been developed in order to improve positive parenting and enhance children's development, such as the Triple P-Positive Parenting Program (Sanders, 2012), Incredible Years (IY) Program (Webster-Stratton, 2001), Families and Schools Together (FAST) (McDonald et al., 1997) and Parent Management Training – Oregon Model (Forgatch & Patterson, 2010). Despite the large number of evaluative research studies into these programmes, little is known about the key features of what makes a parenting programme successful. To synthesise the research evidence, many literature reviews with diverse focus have been conducted.

According to Higgins et al. (2019), a systematic review of reviews, also known as overview of reviews or umbrella review, is particularly suitable for seeking the best currently available evidence to address focused research questions in a research area already characterized by a series of reviews. Our synthesis of the research evidence addresses two questions:

1. Are parenting programmes effective in improving parenting and children's development?
2. Which factors of the programme design and implementation contribute to the successful outcomes of parenting programmes?

The aim of this systematic review of reviews is to synthesis the best available evidence into a set of recommendations of the optimal approaches to parental education and support.

Considering the crucial role that parents play in early childhood (Landry, Smith, & Swank, 2003), this study focuses on universal early childhood parenting programmes for parents of children aged from birth to 6 years old. We use parenting programme as an umbrella term of interventions, training courses, educational programmes and alike which are aimed at improving parenting.

4. METHODS

4.1 Literature search

We conducted a systematic search of bibliographic databases through ProQuest (34 databases), Ovid (5 databases) and EBSCOhost (ERIC database) on 22 February 2020, focusing on reviews published since 1 January 2010 (to the date of search). The search terms used were "Parent*-program* OR Parent*-intervention* OR Parent*-train* OR Parent*-course* OR Parent*-education" and "review* OR meta-analys*". Whilst we acknowledge that this limits the scope of the review (and omits publications in other languages), our aim was to review articles with similar levels of comparability, from a shared linguistic tradition. We acknowledge that reviews published in other languages may yield different results.

4.2 Inclusion and exclusion criteria

The aim of this review is to synthesise the findings of reviews and meta-analyses about early childhood parenting programmes. The following inclusion criteria were identified as benchmarks of quality and relevance:

- Universal parenting programmes
- For parents of children aged 0-6 years
- Literature review and meta-analysis papers
- Published in the past ten years (2010-2020)
- Peer reviewed
- English language

Review studies that focused on children or families with specific needs are not included due to two reasons: *i)* a great many studies have been conducted to synthesise research evidence of parenting programmes for families with special needs, whereas universal parenting programmes are less studied; *ii)* it is more sensible to separately synthesise programmes designed to address similar special needs instead of mixing them all together. Therefore, the following exclusion criteria were set in this review to focus on universal parenting programmes:

- Programmes for families with specific risk factors
- Programmes that require clinical screening for admission

- Programmes solely for adoptive parents, divorced parents and foster carers

4.3 Quality assessment and selection of reviews

The initial search of bibliographic databases yielded 1231 records. An additional seven records were identified by hand search. Two hundred twenty-three duplicates were removed, resulting in 998 records for screening. The titles and abstracts were screened according to the inclusion and exclusion criteria. After 878 records were excluded by title and abstract, 120 full-text articles were assessed for eligibility.

By adopting the framework developed by Pascal, Bertram and Peckham (2018), we conducted a quality assessment with reference to the following four key dimensions: relevance of the study to the research questions; conceptual/theoretical framing; methodological rigour, transparency and ethics; and reliability, validity and trustworthiness of the findings. We scored each dimension on a four-point scale, with higher score indicating more relevance and higher methodological quality. Articles with a score equal or higher than 12 are included in this review (see appendix for the table of quality assessment). Figure 1 illustrates the PRISMA flow diagram of systematic search of literature reviews and meta-analyses of early childhood parenting programmes. Actions at each stage were constantly discussed and reviewed within the research term to ensure the rigor of the process.

4.4 Data extraction and synthesis

The full text of included review studies were reviewed to extract data regarding the type of literature review, literature search period, number of studies included, targeted parent group (*incl.* children's age), type of interventions (*e.g.*, theoretical framework and delivery modes) and main findings relevant to the current research questions.

A thematic approach was adopted to synthesise the findings. We started by coding the findings in relation to the research questions. The initial codes were subsequently reviewed to form themes. Then the thematic coding framework was checked and refined in a second review of the findings of included review studies. The final themes with corresponding sub-themes were used to address the research questions.

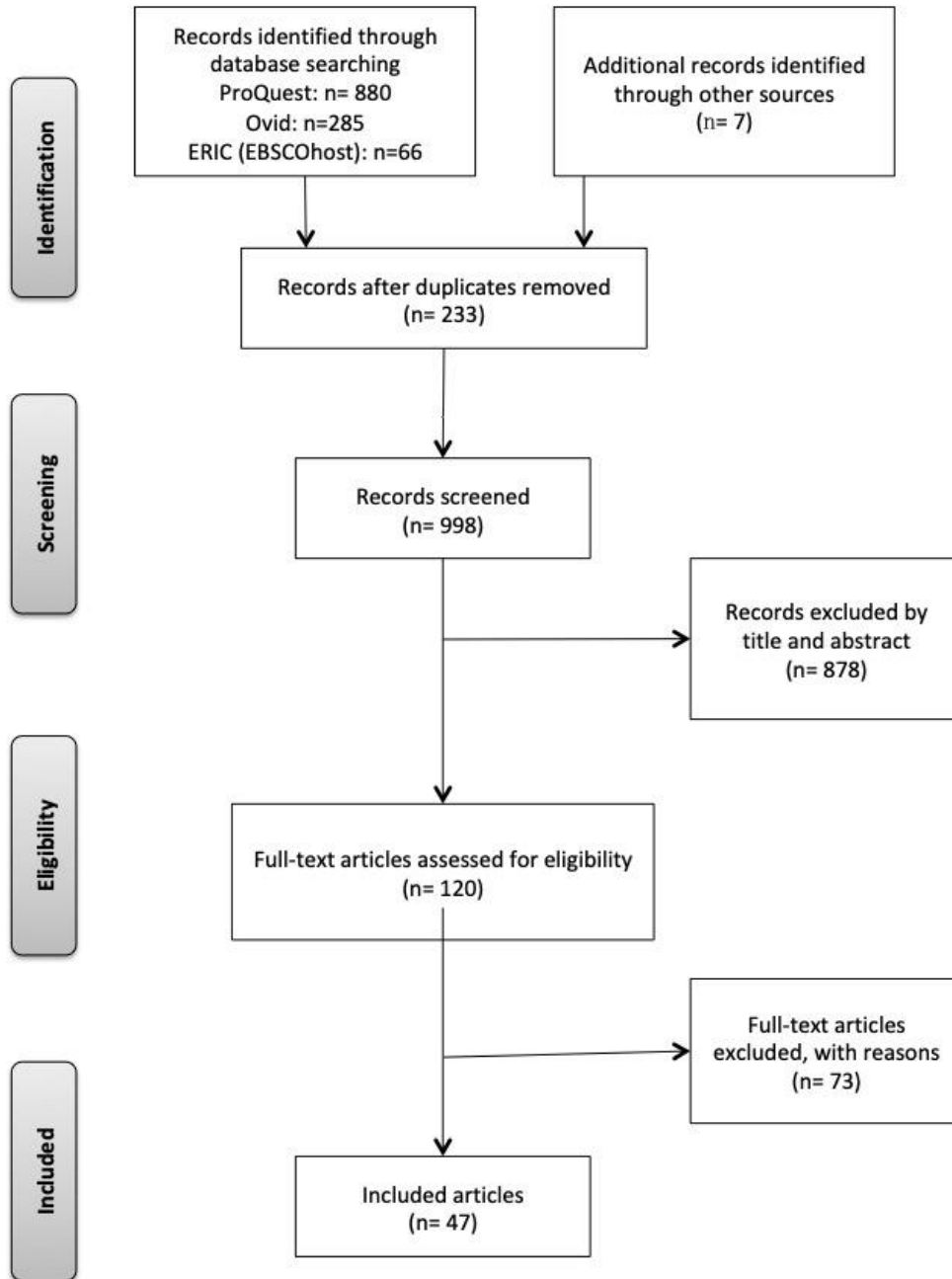


Figure 1. PRISMA flow diagram of systematic search

5. FINDINGS AND DISCUSSION

5.1 Summary of the included review studies

Forty-seven review studies are included in the synthesis, which are variously described as meta-analyses ($n=13$), qualitative systematic reviews ($n=12$), programme reviews ($n=9$), evidence reviews ($n=8$), narrative reviews ($n=2$), scoping review ($n=1$), realist review ($n=1$) and review-based conceptual model ($n=1$). Table 1 presents the summary of the included review studies.

Table 1. Summary of the included review studies

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
Amin et al. 2018	Systematic review and meta-analysis of universal parent education interventions' efficacy	10 (Database's point of inception to November 2016)	First-time biological parents of a new-born	Various theoretical frameworks; Individual-based and group-based delivery methods	<ul style="list-style-type: none"> • Universal parent education enhances first-time parents' self-efficacy at short-term follow-up. • Longer intervention duration has better improvements in parental self-efficacy. • No differences in the effects on parental self-efficacy improvements between individual-based and group-based interventions.
Barlow et al. 2016	Systematic review of systematic reviews and RCT studies of intervention effects on attachment-related outcomes	6 systematic reviews and 11 RCTs (January 2008- July 2014)	Parents of preschool children (0-5 years)	Psychoanalytic models and attachment theory; Various delivery methods	<ul style="list-style-type: none"> • Parent-infant psychotherapy, video feedback and mentalisation-based programmes seem to improve attachment-related outcomes. • Evidence supports the use of brief, sensitivity-focused interventions. • Characteristics of effective programmes include shorter duration, providing direct service to parent-child dyad, using qualified intervenors and assessing parent-child interaction with free-play tasks.

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
Barton et al. 2014	Review of parent-focused social-emotional programs	8 (Not specified)	Parents of children aged 0-5 years	Various theoretical frameworks; Individual sessions and group delivery	<ul style="list-style-type: none"> The family-centred approach is essential to early interventions. Characteristics of effective programmes include a focus on routines, use of live or video modelling, opportunities for practice, and performance-based feedback.
Baumann et al. 2015	Systematic review of the cultural adaptation process and implementation for four evidence-based parent training interventions	10 (before January 2013)	Ethnic minority parents (children's age not specified)	Parent-child Therapy, The Incredible Years, Parent Management Training-Oregon Model, and the Positive Parenting Program	<ul style="list-style-type: none"> Potential targets of cultural adaptation include language, persons, metaphors, content, concepts, goals, methods, and context (Ecological Validity Model (EVM)). While surface modifications (e.g., translation of the materials) appear to increase the feasibility of the program, there is debate regarding the effects of deep modifications (e.g., changes in methods and content).
Boddy et al. 2011	Review of parent support across five European countries, reflection on the evaluation of effectiveness	Not specified	Not specified	Standardised parenting programmes and parent/family support embedded in universal service provision	<ul style="list-style-type: none"> England emphasizes on standardised parenting programmes and formal outcome evaluations. The European countries embed parent/family support in universal service provision and carry out evaluation in the form of assessment of individual progress. Process evaluations should be carried out alongside outcome measurements. Evaluation needs to address the question of whether to target the parent as an individual or the family as a whole. Evaluations emphasizing on standardisation and pre-defining measurable outcomes have the risk of neglecting the complexity of parenting and interventions.
Corsano &	Review of	8	Mothers of	Reminiscing	<ul style="list-style-type: none"> Reminiscing training is effective

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
Guidotti, 2019	parents' reminiscing training	(1999-2019)	preschool children	training; Individual session delivered to parent-child dyad	<p>in making mothers' reminiscing style more elaborative, functional and adaptive.</p> <ul style="list-style-type: none"> • Parental reminiscing training is effective in promoting children's emotional knowledge, cognitive and language abilities. • Commonly used methods include videos, booklets and audio recordings to encourage the use of more elaborative and emotional reminiscing style. • More fathers should be involved in reminiscing training.
Davis et al. 2017	Review of existing parenting apps for parent education	46 Apps (2009-2016)	Parents (children's age not specified)	Mobile applications	<ul style="list-style-type: none"> • Parent education apps vary in the purpose, target audience and topics. • Most apps link to websites and articles for users to read. • Without customized experiences, the functionality of apps is limited.
De la Rie et al. 2017	Review of the implementation quality of family literacy programme	46 (2000-2013)	Parents of young children	Family literacy programmes; Researcher-delivered and teacher-delivered sessions	<ul style="list-style-type: none"> • An integral approach should be adopted to examine programme implementation quality. In addition to parents' quantitative engagement information, studies should also report characteristics of parent training, quality of engagement and transfer to daily life. • More evidence is needed to explain the relationship between implementation and effects of the programmes.

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
Dol et al. 2019	Scoping review of parent-targeted postnatal educational interventions	77 (2000-October 2017)	Parents of newborns	Postnatal educational interventions; In-hospital interventions, postnatal follow-up visits, home visits and eHealth strategies	<ul style="list-style-type: none"> • Parent-targeted postnatal education interventions have a positive impact on parents' outcomes but report mixed findings on newborn outcomes. • Most of postnatal education focuses on mothers. Interventions should be extended to fathers and other family members. • A combination of delivery methods of immediate parent-targeted postnatal education before hospital discharge with access to an eHealth technology can be used to improve newborn care.
Duncan et al. 2017	Systematic review of economic evaluations of parenting interventions	10 (2004-2014)	Parents of children aged 0-3 years	Interventions aimed to promote parent-infant interaction; Various delivery methods	<ul style="list-style-type: none"> • Evidence suggests that early years parenting interventions can be economically efficient and worthwhile for investment. • Evidence shows that <i>"investment in early years parenting interventions that aim to promote parent-infant interaction can improve population health, reduce inequalities in health and save money"</i>. (p.807)
Fletcher et al., 2011	Meta-analysis study of the effectiveness of Triple P programme on fathers	28 (before 2011)	Parents (children's age not specified)	Triple P parenting programme; Various delivery methods	<ul style="list-style-type: none"> • Meta-analysis result shows general effectiveness of the Triple P in improving parenting practices as measured by self-report Parenting Scale. • There are significant differences in intervention effectiveness between mothers and fathers, with a smaller effect on fathers' parenting practices. • Three recommendations have been proposed to promote programme effectiveness in fathers, including recognising father's concerns, adopting active learning and using male facilitators.

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
Gardner et al., 2019	Meta-analysis of age effects of parenting intervention	15 IY RCTs (before 2018) and 154 RCTs of various parenting interventions (before January 2016)	Parents of children aged 2-11 years	Social learning theory perspectives; Various delivery methods	<ul style="list-style-type: none"> Results of meta-analysis suggest that interventions earlier in childhood are not necessarily more effective than later in preventing children's disruptive behaviours as reported by parents. Likewise, age-specific interventions are not necessarily more effective than age-general ones.
Gilmer et al. 2016	Realist review of parent education interventions designed to support the transition to parenthood	72 (not specified)	Parents of children aged 0-1 years old	Various programmes with different delivery methods	<ul style="list-style-type: none"> There is not enough evidence to support the effectiveness of universal, population-level parent education in improving parent behaviours or impact child outcomes. It is recommended that "<i>the design of a universal, population-level education intervention should incorporate adult learning principles including a respect for parents' current knowledge and skill and an appreciation of parent choice and autonomy</i>"(p.130); specific resources should be available for parents to access timely; and the design of programmes should be evidence-based.
Gonzalez et al. 2018	Systematic review of effective engagement strategies in parenting interventions	8 (January 1996-August 2017)	Parents of children aged 2-8 years old	Various programme with different delivery methods	<ul style="list-style-type: none"> With the limited available evidence, three engagement strategies (advertisement, incentive, and engagement package) have a significant effect on a certain stage of engagement. It is recommended that different engagement strategies should be adopted at different stages of the intervention in order to promote parent engagement.

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
Grindal et al., 2016	Meta-analysis of ECE programmes with adding parent education	46 (1960- 2007)	Parents of children aged 3-5 years old	Parenting education included in preschool programmes; Various delivery methods	<ul style="list-style-type: none"> Evidence suggests no significant differences in programme impacts on short-term measures of children's cognitive or pre-academic skills between preschool programmes with and without adds-on parent education. Parent education with one or more home visits shows significantly larger effect sizes for cognitive outcomes. Suggestive evidence promotes active learning (<i>e.g.</i>, modelling, practising parenting skills) in parent education.
Holmes et al. 2010	Meta-analysis of the effectiveness of resident fathering education programmes	16 (not specified)	Fathers of children from birth to 10 years old	Various fathering programme; Various delivery methods	<ul style="list-style-type: none"> Evidence suggests an overall positive effect of fathering education programmes. Evidence suggests significant effect sizes for father involvement and fathering attitudes.
Iverson & Gartstein, 2018	Systematic review of temperament-based interventions	13 (before May 2016)	Parents (children age range from 4 months to 6 years)	Temperament-based interventions; Various delivery methods	<ul style="list-style-type: none"> Evidence suggests that temperament-based interventions can increase parental knowledge of temperament, reduce behaviour problems, improve math and reading achievement, and reduce numbers of medical visits. Temperament-based interventions can be more effective in some contexts than others. It is recommended to promote goodness of fit between a child's temperament and the surrounding environment.
Joo et al.,	Meta-analysis of	10 studies of	Parents of	Fully	<ul style="list-style-type: none"> Results suggest that " <i>adding fully developed parent programs</i>

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
2020	the effects of implementing enhancement programs in ECE settings	parent enhancement programmes (1960-2007)	children aged 3-5 years old	developed parent enhancement programmes; Various delivery methods	<i>to ECE was associated with large improvements to children's behavioral, health, and some dimensions of socio-emotional outcomes, as well as modest improvements to cognitive abilities and overall outcomes in general, but not associated with improved pre- academic skills compared to ECE without such programs" (p.14).</i>
Lakind & Atkins, 2018	Evidence review of positive parenting intervention for families in poverty	Not specified	Parents (children's age not specified)	Positive parenting programmes; Various delivery methods	<ul style="list-style-type: none"> Evidence suggests that "parenting programs may reach and engage more families if services are 1) led by fellow community members to align with cultural norms and multiply opportunities for service provision; 2) embedded in key settings such as homes and schools with flexibility to bridge settings; 3) aligned with the goals and needs of those settings, and bundled with other services to address families' pressing needs, thereby taking a "family- centred" form; and 4) offered through multiple formats, from traditionally formatted sequenced curricula to informal conversations infused with core parenting principles" (p.34).
Lechowicz et al., 2019	Narrative review of research on father engagement in intervention for child wellbeing	Number of studies not specified (before June 2018)	Fathers (children's age not specified)	Various parenting programmes; Various delivery methods	<ul style="list-style-type: none"> The following practical recommendations for improving fathers' engagement have been proposed: engaging fathers as part of the parenting team; avoiding a deficit model of fathering; increasing awareness of parenting interventions for fathers; ensuring father-inclusive content and delivery of parenting interventions; increasing father engagement practices at the organisation/service level; and increasing professional training regarding father engagement.
Lee et al. 2018	Systematic review of father-inclusive	21 (before July 28, 2017)	Fathers during perinatal period	Father-inclusive perinatal	<ul style="list-style-type: none"> There are few perinatal parent education programmes available to fathers.

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
	perinatal parent education programmes			parent education programmes; Various delivery methods	<ul style="list-style-type: none"> The limited evidence shows association between perinatal father education and increased father involvement, co-parenting relationship, partner relationship quality, father's mental health and father's supportive behaviours. Mixed results were reported about programme impacts on father-infant interaction, parenting knowledge, and attitudes and parental self-efficacy.
McKee et al., 2018	Review of pre- and perinatal (PPN) parenting education	Not specified	Parents during pre- and perinatal period	Pre- and perinatal parenting education; Various delivery methods	<ul style="list-style-type: none"> Historically, mothers have been the focus of pre- and perinatal parenting education. The authors suggested that fathers should be included in the programmes. Strategies of promoting fathers' engagement were discussed. Pre- and perinatal parenting programmes should work on strengthening couple relationship during transition.
McLean et al., 2017	Review of parental education programmes which use playgroups	62 (before 2014)	Parents of children in early childhood	Parental education delivered in the format of playgroups	<ul style="list-style-type: none"> Evidence highlights the importance of parental education for supporting young children's learning through play. The merits of community playgroups as sites for parental education are discussed. Research evidence recognises the complexities in designing parental education to meet the diverse needs of parents.

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
Mihelic et al., 2017	Systematic review of the efficacy of parenting interventions on parent, infant and parent-infant relationship	36 RCTs (before February 2016)	Parents of infants under 12 months old	Based on attachment-based and/or cognitive-behavioural models; Various delivery methods	<ul style="list-style-type: none"> Results of meta-analysis suggest that early parenting interventions are effective in improving parental responsiveness, and improving or preventing infant sleep problems, but not crying problems. Evidence suggests that briefer interventions that aim at improving parental responsiveness are more effective than longer ones.
Morawska et al. 2019	Evidence review of the effectiveness of parenting interventions on child self-regulatory outcomes	Not specified	Parents of children in early childhood (0-5 years old)	Self-regulation based interventions; Various delivery methods	<ul style="list-style-type: none"> There is limited evidence available for the effectiveness of self-regulation based parent interventions in infancy which is considered as a key developmental period of emerging self-regulation. Evidence suggests that parents have considerable effects on self-regulation skills of pre-school children (2-5 years) yet very limited evidence showed the effectiveness of parent interventions for improving children's self-regulation at this period.
Morrison et al., 2014	Systematic review of early childhood parenting interventions for reducing inequalities in children's health and development	23 interventions (1999-2013)	Parents of children in early years	Various parenting interventions; Various delivery methods	<ul style="list-style-type: none"> Evidence shows that "<i>programmes offering intensive support, information and home visits using a psycho-educational approach and aimed at developing parent's and children's skills showed more favourable outcomes</i>" (i.e., parenting behaviours, overall children's health and higher level of fine motor skills and cognitive functioning) (p.1). It is recommended that interventions should have educational programmes for both parents and children from early pregnancy in addition to home visits by specialists.
Mytton et	Qualitative	26	Parents	Various	<ul style="list-style-type: none"> Six facilitators of engaging

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
al., 2014	systematic review of facilitators and barriers to engagement in parenting programmes	(before April 2011)	(children's age not specified)	parenting programmes; Various delivery methods	<p>parents were identified, namely, behaviour change (<i>e.g.</i>, adopting social learning model); role of the deliverer (<i>e.g.</i>, using trusted or known, well-trained deliverer); group experience; focused message; accessibility (<i>e.g.</i>, flexible access) and incentives.</p> <ul style="list-style-type: none"> • Five barriers were identified, namely, behavioural barriers (<i>e.g.</i>, difficulties in changing behaviours); programme delivery constraints (<i>e.g.</i>, didactic delivery, lack of focus and incompetent deliverer); participant constraints (<i>e.g.</i>, group dynamics, practical issues and stigma); complex interventions and social and cultural barriers.
Nieuwboer et al., 2013	Meta-analytic review of online parenting interventions	19 (2000-2010)	Parents (children age range from 9 month to 21 years)	Guided and self-guided online parenting programmes; Using web-based platforms to deliver the interventions	<ul style="list-style-type: none"> • Results of meta-analysis suggest that online parenting programmes have medium positive effects on parents and children outcomes. • Evidence suggests that online parenting programmes with a specific aim seem to be more effective than general programmes for common parent support.
O'Tool & Christie, 2019	Narrative review of parent education about children's road safety	33 (before February 2018)	Parents of children from birth to 16 years old	Parent education with a focus on road safety; Various delivery methods	<ul style="list-style-type: none"> • Evidence suggests that parent education on road safety could have positive impacts on both parent and child behaviour and knowledge. • The following two strategies can promote effectiveness: targeting parents directly and more hands-on training.
Ortiz & Vecchio,	Review of cultural diversity	55 (1979-	Parents (children's age	Parenting training with	<ul style="list-style-type: none"> • Evidence suggests that ethnicity might not be the most important factor that affects training

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
2013	in parenting training	2008)	not specified)	the participation of ethnic-minority parents; Various delivery methods	effectiveness. <ul style="list-style-type: none"> • More sophisticated evidence-based models should be developed to address cultural-specific barriers.
Ozdemir, 2015	Evidence review of long-term effectiveness of parenting programmes	Not specified	Parents (children's age not specified)	Various parenting programmes; Various delivery methods	<ul style="list-style-type: none"> • Very limited evidence is available for the long-term effectiveness of parenting programmes due to the methodological difficulties in evaluating long-term follow-up effects. • Existing evidence of long-term effectiveness of parenting programmes is mixed and inconclusive.
Panter-Brick et al. 2014	Systematic review of parenting interventions with a focus on engaging fathers	199 (before October 2013)	Fathers (children's age not specified)	Father-inclusive parenting programmes; Various delivery methods	<ul style="list-style-type: none"> • Seven key barriers to engaging fathers in parenting programmes are identified, pertaining to cultural, institutional, professional, operational, content, resource, and policy considerations in the design and delivery of parenting programmes.
Peacock-Chambers et al., 2017	Systematic review of parenting interventions delivered in primary care settings	48 (1 January 1999- 14 February 2017)	Parents of children aged 0-3 years	Various parenting interventions delivered in primary care settings; Various delivery methods	<ul style="list-style-type: none"> • Preliminary evidence shows that sixteen out of the twenty-four interventions under review generated positive developmental outcomes for children aged 0-3 years old. • A variety of theory-based behaviour change strategies were reported, including modelling, group discussion, role play, homework assignment, coaching, and video-recorded interactions.
Pilkington et al. 2019	Systematic review and	18 (before 24	Fathers of children aged	Co-parenting interventions;	<ul style="list-style-type: none"> • Preliminary evidence shows that eight out of the twelve interventions under review

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
	meta-analysis of the efficacy of coparenting interventions	October 2016)	under 18 years	Various delivery methods	<p>reported positive effects on fathers' co-parenting.</p> <ul style="list-style-type: none"> The evidence of the preferable modes of delivery of co-parenting interventions is inconclusive. Nonetheless, web- and mobile-based interventions have advantages in flexibility and scalability.
Pinquart & Teubert, 2010	Meta-analysis of effects of parenting education with expectant and new parents	143 (before end of 2009)	Expectant couples or new parents with a baby aged under six months	Parenting interventions aiming at expectant and new parents; Various delivery methods	<ul style="list-style-type: none"> Results of meta-analysis show small but significant positive effects of early parenting interventions on parent outcomes (<i>e.g.</i>, parenting quality, parenting stress, child abuse/neglect, health-promoting parental behaviour, mental health and couple adjustment) and child outcomes (<i>e.g.</i>, cognitive development, motor development, social development and mental health). Interventions with the following characteristics have larger effect sizes: delivered after childbirth, administered using a group format, administered by professionals, less recent studies and studies that were delivered largely or exclusively to mothers only.

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Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
Piotrowska et al., 2017	Conceptual model of parental engagement in programmes for child mental health	Not specified	Parents (children's age not specified)	Various parenting programmes; Various delivery methods	<ul style="list-style-type: none"> The CAPE model (Connect, Attend, Participate, Enact) is proposed to account for parental engagement. The CAPE model highlights the importance of encouraging active participation (<i>e.g.</i>, both direct and indirect participation) in the programme. The CAPE model emphasises on dynamic family systems and applying newly learnt strategies consistently across time, situation and between parents, highlighting the involvement of fathers. The CAPE model highlights the role of parental confidence/self-efficacy, skills/knowledge, parent-child attributions, family environment and parenting alliance in programme effectiveness.
Reese et al. 2010	Review of parent-training studies of children's language and literacy	11 (search period not specified)	Parents of preschool and kindergarten children	Parent training programmes of shared book-reading, conversations and writing interactions; Various delivery methods	<ul style="list-style-type: none"> Evidence suggests that the parent training programmes of shared book-reading, conversations and writing interactions are effective in improving preschool children's language and emergent literacy skills. The authors suggest that promoting language development might be more important than promoting literacy development through parent-training programmes in early childhood.

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Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
Sanders et al., 2014	Systematic review and meta-analysis of Triple P programme	116 (1970 to 29 January 2013)	Parents (from birth to teenage years)	Triple P programme; Various delivery methods	<ul style="list-style-type: none"> Results of meta-analysis suggest that Triple P programme have significant short-term and long-term effects on children's social, emotional and behavioural outcomes; parenting practices; parenting satisfaction and efficacy; parental adjustment; parental relationship and child observational data. The effect sizes range from small to medium.
Sandler et al., 2011	Review of the long-term impact of prevention programs to promote effective parenting	46 (search period not specified)	Parents (children age range from 0-18 years)	Universal, selective, or indicated prevention or promotion intervention; Various delivery methods	<ul style="list-style-type: none"> Evidence suggests that parenting programmes have long-term effects on children's outcomes from one to 20 years later. Three potential pathways of changes have been proposed, namely, through effects on parenting skills, parental self-efficacy and positive parenting; through improvement in children's behaviours, self-beliefs and relationships with others; or through effects on environments and child-environment transactions.
Trivedi, 2017	Meta-analysis of the effect of group-based parent training programmes on improving parental psychosocial health.	48 RCTs (search period not specified)	Parents (children's age not specified)	Group-based parent training; Various delivery methods	<ul style="list-style-type: none"> Results of meta-analysis show that group-based parenting programmes have short-term effects on parents' depression, anxiety, stress, anger, guilt, confidence and satisfaction with partner relationship, as well as significant effects on stress and confidence at six-month follow-up. Additional support is needed to maintain positive effects of group-based parenting programmes in the long term.
van Mourik et al., 2017	Meta-analysis of the	18 (before	Ethnic minority parents	Group-based interventions	<ul style="list-style-type: none"> Results of meta-analysis show small but significant effects of parent training on parenting

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
	effectiveness of culturally adapt parent training programmes	August 2015)	(children's age range from 0-12 years)	aimed at improving parent-child relationship; Various delivery methods	behaviours, parental perspectives and child outcomes. <ul style="list-style-type: none"> Evidence suggests that parent training programmes with cultural adaptations, especially deep structure cultural sensitivity, are more effective in improving parenting behaviour.
Vesely et al., 2014	Review of the cultural competence of parenting education programs for Latino families	13 programmes (after 1990)	Latino parents with Children aged 0-5 years old	Culturally competent parenting programmes; Various methods of delivery	<ul style="list-style-type: none"> The authors highlight the importance of incorporating cultural values and experiences in programme development and continuous improvement through listening to local communities and stakeholders. Cultural competence in the implementation and evaluation of programmes is emphasised.
Voisine & Baker, 2012	Review of how universal parenting programs discourage parents from using corporal punishment	10 programmes	Parents (children's age not specified)	Universal group-based parent training programmes; Various delivery methods	<ul style="list-style-type: none"> The authors highlight the importance of parent-child relationship in preventing disciplinary issues. In addition to improving parenting knowledge, parenting programmes should directly address parents' attitudes and beliefs about corporal punishment in order to foster transformations. Alternative strategies to corporal punishment are mainly related to communication skills and relationship building.
Vu et al., 2015	Review of evidence-based interventions that focus on caregiver-child relationship	6 interventions (before March 2013)	Parents of children from birth to five years old	Focus on caregiver-child interactions; Various delivery methods	<ul style="list-style-type: none"> The authors suggest that parenting interventions focusing on positive caregiver-child interactions could be used in community-based early childhood programmes.
Whittaker & Cowley, 2012	Review of literature reviews of	23 (search period not	Parents (children's age not specified)	Various parenting programmes;	<ul style="list-style-type: none"> Barriers to attendance and engagement of parenting programmes are categorised as personal life factors (<i>i.e.</i>, beliefs, lifestyles and limited resources)

Authors and year of publication	Type of literature review	Number of studies included (search period)	Targeted parent group and children's age	Programme theoretical foundations and delivery modes	Main findings relevant to the current research questions
	attendance and engagement of parenting support programmes	specified)		Various delivery methods	and programme-specific factors (<i>i.e.</i> , delivery, content and support arrangements). <ul style="list-style-type: none"> • Suggestions are proposed to overcome the identified barriers.
Wilson et al., 2012	Systematic review and meta-analysis of Triple P	33 (before 29 August 2011)	Parents (children's age not specified)	Triple P programme; Group-based delivery methods	<ul style="list-style-type: none"> • Evidence suggests that mothers report significantly positive effects of Triple P across studies. • There is not adequate evidence available for the effectiveness for fathers. • The long-term effectiveness of Triple P is inconclusive.
Wittkowski et al., 2016	Systematic review of the impact of group-based early interventions for parents of preschool children on parental self-efficacy	16 (before January 2014)	Parents of preschool children (under 6 years old)	Various parenting programmes; Various delivery methods	<ul style="list-style-type: none"> • The majority studies report a significant positive impact of group-based parenting interventions on parental self-efficacy. • Larger effect sizes are reported by studies assessing task-specific parental self-efficacy than those assessing general parental self-efficacy.

5.2 Evidence of the effectiveness of parenting programmes

Twenty-nine of the included review studies address the issue of programme effectiveness. Overall, evidence suggests that parenting programmes have had positive effects on those parent outcomes measured by the programmes such as:

- parenting knowledge (Dol et al., 2019; Iverson & Gartstein, 2018)
- parental attitudes and self-beliefs (Amin, Tam, & Shorey, 2018; Wittkowski, Dowling, & Smith, 2016)
- parenting behaviours (Corsano & Guidotti, 2019; Fletcher, Freeman, & Matthey, 2011; Sanders, Kirby, Tellegen, & Day, 2014)

- mental health (Pinquart & Teubert, 2010; van Mourik, Crone, de Wolff, & Reis, 2017)
- couple relationship quality (Lee, Knauer, Lee, MacEachern, & Garfield, 2018; Trivedi, 2017)

Whilst this is an encouraging outcome, there are two important caveats to this finding: First, results of meta-analysis studies show that the positive effects on the aforementioned parent outcomes are significant but with only a small to medium effect size (Amin et al., 2018; Holmes, Galovan, Yoshida, & Hawkins, 2010; Nieuwboer, Fukkink, & Hermanns, 2013; Pinquart & Teubert, 2010; Sanders et al., 2014). Second, the evidence presented is mainly about short-term effects measured either immediately after interventions or at short-term follow-up (*i.e.*, within 3 months). Evidence of long-term programme effectiveness is very limited, mainly due to ethical issues and methodological difficulties in evaluating long-term effects of parenting programmes (Özdemir, 2015). Existing reviews that have attempted to look at long-term effects report mixed and inconclusive evidence (Özdemir, 2015; Sanders et al., 2014; Sandler, Schoenfelder, Wolchik, & MacKinnon, 2011; Wilson et al., 2012). A number of reviews have explicitly called for more empirical studies to investigate long-term effectiveness of early childhood parenting programmes (Mihelic, Morawska, & Filus, 2017; Panter-Brick et al., 2014).

The evidence of programme effectiveness for children development is more varied than that of parent outcomes. Some reviews report significant improvement in children's outcomes, including:

- physical health (Duncan, MacGillivray, & Renfrew, 2017; Iverson & Gartstein, 2018),
- behavioural development (Gardner et al., 2019; Sanders et al., 2014; Sandler et al., 2011)
- cognitive development (Morrison, Pikhart, Ruiz, & Goldblatt, 2014; Reese, Sparks, & Leyva, 2010),
- socio-emotional development (Barlow et al., 2016; Corsano & Guidotti, 2019; Sanders et al., 2014)

On the other hand, some reviews showed mixed evidence (Dol et al., 2019; Grindal et al., 2016; Joo et al., 2020; Mihelic et al., 2017), suggesting that the positive programme effects on parents do not necessarily get transferred to positive outcomes for children. More empirical studies are needed to evaluate the effects of parenting programmes on children's

development, ideally externally measured (*i.e.*, not solely rely on parent report) and with long-term follow-ups.

5.3 Factors that affect the effectiveness of parenting programmes

Both the personal factors of participants (*e.g.*, demographic background) and the programme factors (*e.g.*, design and implementation) can affect the effectiveness of parenting programmes. The present review focuses on the latter in order to gather research evidence to inform the design and implementation of future parenting programmes for enhanced effectiveness.

5.3.1 Theoretical frameworks

The parenting programmes under scrutiny of the included review studies are based on a variety of theoretical frameworks, including social cognitive learning theory, attachment theories, psychodynamic theories, behavioural theories, ecological theories, developmental theories, and so on. Some programmes mainly draw on a single theoretical framework (*e.g.*, Triple P and Incredible Years) (Baumann et al., 2015) whereas some programmes take advantage of multiple theoretical frameworks (*e.g.*, Child FIRST) (Barton et al., 2014).

No evidence suggests whether using a single or multiple theoretical frameworks would result in higher effectiveness, nor do different theoretical frameworks lead to consistently different levels of effectiveness. Based on the evidence, we suggest that programme effectiveness depends on the “fit” between the chosen theoretical framework(s) and the programme aims/purposes (*e.g.*, the parents' needs). For example, social cognitive learning theory and behavioural theories are suitable for programmes targeting parenting behaviours (Fletcher et al., 2011; O'Toole & Christie, 2019; Piotrowska et al., 2017); attachment theories are fit for programmes aimed at improving parent-child relationship (Barlow et al., 2016; Barton et al., 2014); and ecological theory is beneficial to the design of multicomponent programmes serving complex needs of parents (Whittaker & Cowley, 2012).

Evidence also suggests that following what we have called an empowering approach is more effective than a deficit model in the design of parenting programmes. Empowering approaches promote inclusive, non-judgemental and need-based teaching in the implementation of parenting programmes (Lechowicz et al., 2019; McKee, Stapleton, & Pidgeon, 2018). In addition, clarity in the programme theoretical background and theory of

change is essential for generating successful outcomes (Mytton, Ingram, Manns, & Thomas, 2014; Vu, Hustedt, Pinder, & Han, 2015; Whittaker & Cowley, 2012). The practitioners who lead the programmes need to fully understand the theoretical principles of that particular programme and its relevance to parents' needs. Moreover, they need to make sure that parents are informed about the theoretical underpinnings of the programme content and teaching methods, not only at the beginning but also throughout the programme.

5.3.2 Programme length and intensity

A wide range of programme length and intensity has been reported across the reviews. Five systematic reviews address the question of the association between programme effectiveness and its length and intensity, among which three suggest longer intervention duration and more intensive support lead to better outcomes (Amin et al., 2018; Grindal et al., 2016; Morrison et al., 2014), whereas the other two suggest briefer interventions are more effective (Barlow et al., 2016; Mihelic et al., 2017). Obviously, it would be arbitrary to draw on the above evidence without examining the contexts. The following paragraphs present more details of the evidence.

Amin et al. (2018) report that longer parenting programmes (> 10 weeks) generate significantly more improvement in parental self-efficacy of first-time parents, suggesting that parents of newborns need the time and space to learn and practise parenting skills. Grindal et al. (2016) examined add-on parent education in ECE programmes for children aged 3-5 years old. They find that parent education with one or more home visits have significantly larger effect sizes for children's cognitive outcomes, possibly as a result of more active learning opportunities for parents. Likewise, Morrison et al. (2014) find that the early childhood parenting programmes that offer intensive support to parents in need produce more favourable outcomes for both parents and children.

In contrast, Barlow et al. (2016) suggest sensitivity-focused parenting interventions with shorter duration are more effective in improving preschool children's attachment-related outcomes. Similarly, the meta-analysis results of Mihelic et al. (2017) show that briefer interventions are more effective in improving parental responsiveness of parents of infants (under 12 months old). One explanation of the better effectiveness is that briefer sessions are less likely to pose extra burden to parents, thereby promoting better parent engagement and adherence to the interventions.

In spite of the limited evidence, we propose the following principles for deciding on programme length and intensity to maximise effectiveness. First and foremost, parents need to be provided with adequate opportunities for active learning to allow sufficient time for change. However, the programme should avoid being demanding or intrusive. Instead, a needs-based approach with a certain degree of flexibility in programme length and intensity can be more engaging for parents, thereby more cost-effective. Considering the paucity of existing empirical evidence, more studies are needed to address the issue of programme effectiveness and length/intensity.

5.3.3 Delivery modes

Parenting programmes are taught using a variety of formats, which can be roughly categorised as group-based, individual-based (*e.g.*, home visits) and online (*e.g.*, mobile applications and web-based platforms). There is no evidence to suggest that any of the formats is consistently superior across contexts. As a matter of fact, most parenting programmes combine different formats to make use of the advantages of each format.

Group-based

Grouping parents is a strategy widely employed in parenting programmes of early childhood. Its effectiveness is supported by ample evidence (Amin et al., 2018; Pinquart & Teubert, 2010; Trivedi, 2017; van Mourik et al., 2017; Wittkowski et al., 2016). Parent groups provide a safe space for parents to share experiences, discuss concerns and most importantly, receive peer support. In addition to typical parent groups, McLean et al. (2017) have demonstrated evidence supporting the use of community playgroups (*i.e.*, *parent-child groups who meet regularly for the purpose of socialisation and engagement in play activities*, p. 231) as sites for parental education in early childhood, in particular, to promote young children's learning through play. Generally speaking, group-based formats are more economical than individual-based formats (Duncan et al., 2017).

While positive group experiences facilitate parent engagement, Mytton et al. (2014) point out some potential negatives with group dynamics, such as parents' fear of attending groups, reluctance to speak up in group settings, distrust of others, vast disparities between group members and feeling of exclusiveness. This highlights the importance of skilful group facilitation throughout group-based parenting programmes in order to achieve high

effectiveness.

Individual-based

Parenting programmes employing an individual-based format emphasise meeting the specific needs of parents. Through home visits or consultation sessions, parents are able to obtain tailored support which tends to be better received than general support (Gilmer et al., 2016). An individual-based format also allows more flexibility in programme delivery, which boosts active parent engagement (Whittaker & Cowley, 2012). However, the implementation of individual-based parenting programmes is largely constrained by financial and human resources available. Under some circumstances, it is not realistic to deliver parenting programmes in individual-based format due to limited resources. We recommend that some individual sessions can be used as adds-on to group-based parenting programmes so as to attend to any specific and discrete needs of some parents.

Online

Along with the rapid development in technology and Internet, an increasing number of parenting programmes are delivered using web-based platforms and mobile applications. Although only two out of the 47 reviews specifically focus on online parenting programmes, the great potential of technology-supported online parent education is widely acknowledged across reviews (Davis et al., 2017; Dol et al., 2019; Fluja-Contreras, García-Palacios, & Gómez, 2019; Gilmer et al., 2016; McKee et al., 2018; Nieuwboer et al., 2013; Pilkington, Rominov, Brown, & Cindy-Lee, 2019).

Evidence regarding direct comparison of effectiveness between face-to-face and online parenting programme is scarce. Nonetheless, the meta-analysis review of online parenting interventions (*incl.* parent self-guided online courses and expert-guided online interventions) conducted by Nieuwboer et al. (2013) show that overall online parenting programmes have medium positive effects on both the parent and children outcomes measured by the programmes ($ES = .67$ and $.42$, respectively). However, they also find that the web-based adaptations of face-to-face parenting programmes do not demonstrate the same level of effectiveness as their face-to-face counterpart. This raises the question of whether face-to-face and online parenting programmes have distinctive characteristics that are effective for different contexts. Future studies can explore this issue to shed light on how to choose

between face-to-face and online formats for teaching parenting programmes to different audiences with diverse needs.

The most prominent advantage of an online parenting programme is that it breaks down geographical barriers and time constraints by enabling parents to access resources and support anytime anywhere that suits their needs (McKee et al., 2018). The flexibility and mobility in programme delivery can lead to a wider geographical reach, as well as a larger number, of parents at limited costs. Long-term positive effects can be maintained through providing online resources for a prolonged time (Dol et al., 2019). Davis et al. (2017) point out that newer generations of young parents are inclined to use the Internet to access information about care and education of children. In the same vein, some studies report that parents, especially fathers, prefer online parenting programmes to traditional ones as they find remote participation less intimidating and less demanding (Lechowicz et al., 2019; Pilkington et al., 2019). Furthermore, by making use of the multi-media and interactive functions supported by advanced technology, online parenting programmes can create active learning opportunities and tailor support based on individual progress. In the light of these advantages, we recommend to fully exploit online formats in future design of parenting programmes when appropriate.

Nonetheless, it is important to bear in mind that an online format may not be suitable for some parenting programmes (Nieuwboer et al., 2013). Some advantages of traditional face-to-face parent education cannot be completely replicated in online parent interventions (Nieuwboer et al., 2013). Therefore, many parenting programmes have incorporated online resources and remote learning elements in traditional face-to-face programmes so as to make the most of the benefits of high-tech development (Baumann et al., 2015; Dol et al., 2019; Fletcher et al., 2011). Considering the trend and the great potential of online parent education, more empirical studies are needed to explore how to refine online programme design and implementation in order to maximise effectiveness.

5.3.4 Family-centred approach and father-inclusiveness

The participants of early childhood parenting programmes so far have mainly been mothers. The absence of the participation of fathers in parenting programmes is an area of concern identified across the reviews. This is particularly significant for programmes which seek to adopt a family-centred approach. Boddy, Smith, and Statham (2011) point out that parenting,

as a dynamic and relational process, takes place within a family system. Therefore it is sensible to target the whole family in multi-dimensional parenting interventions (Lakind & Atkins, 2018). Some evidence suggests that interventions involving only one parent may introduce new family conflicts as the partner or other family members may have contradictory parenting ideas or behaviours (Pilkington et al., 2019; Whittaker & Cowley, 2012).

Disagreement between parents can result in inconsistent parenting practices, which can be detrimental to children's development. Piotrowska et al. (2017) propose that both parents should actively participate in the parenting programme through either direct or indirect participation, that is, one parent is directly enrolled in the programme while the other parent will obtain debriefing and instruction from the enrolled partner. Only when the newly learnt parenting strategies can be applied consistently between parents as well as across time and situations, can the parenting programme achieve its full effectiveness (Piotrowska et al., 2017). The family-centred approach also draws attention to the relationship between the parents and its bi-directional association with co-parenting quality (Lee et al., 2018; Pilkington et al., 2019). Given the evidence, a family-centred approach is promoted in the design and implementation of early childhood parenting programmes (Barton et al., 2014).

Therefore, a key aspect of developing a family-centred approach is to involve fathers in parenting programmes. Six of the 47 reviews focus on fathers' engagement in early childhood parenting programmes (Fletcher et al., 2011; Holmes et al., 2010; Lechowicz et al., 2019; Lee et al., 2018; Panter-Brick et al., 2014; Pilkington et al., 2019), with many more explicitly emphasising the need to promote fathers' involvement in all kinds of parenting education (Amin et al., 2018; Corsano & Guidotti, 2019; Dol et al., 2019; Morrison et al., 2014; Piotrowska et al., 2017; Wilson et al., 2012). While evidence shows positive effects of parenting programmes on fathering (Holmes et al., 2010; Lee et al., 2018; Pilkington et al., 2019), the effect size is reported to be smaller than that of mothers (Fletcher et al., 2011; Pinquart & Teubert, 2010; Wilson et al., 2012). Several barriers to effectively delivering parenting programmes to fathers have been identified, including socio-cultural impediments (*e.g.*, stigma, gender stereotypes, *etc.*), mother-centred content and delivery modes, secondary role in child's care, and personal hurdles (*e.g.*, parental attitudes, time constraint, *etc.*).

The following suggestions have been proposed to promote and enhance fathers' engagement in parenting programmes. Firstly, the programme content should be father-inclusive.

Lechowicz et al. (2019) emphasise that a deficit model of fathering should be avoided. Instead, a strengths-based approach should be applied to focus on fathering competencies. Parents' concerns regarding stigma and gender stereotypical role of parenting should be sensitively addressed, highlighting the importance of fathers, as co-parents, taking equivalent responsibility of young children's care and education. Secondly, programmes should be taught in a father-friendly manner. The use of male leaders/facilitators is recommended, and that leaders/facilitators should be given professional training in how to ensure father-inclusiveness when leading the programme. Lechowicz et al. (2019) and Pilkington et al. (2019) both encourage the use of technology to engage fathers in web- and mobile-based parenting programmes as evidence shows that fathers appreciate the convenience of accessing online resources about parenting. Fletcher et al. (2011) suggest that creating more active learning opportunities for fathers (*e.g.*, sport-related activities with children) can be beneficial. Nevertheless, we argue against making gender stereotypical assumptions about fathers' preferences. Instead, an evidence-based approach to better engaging parents in learning about child-rearing is recommended. Finally, Panter-Brick et al. (2014) lay emphasis on the need to support father inclusion at the policy and organisational level. To support fathers as fully as possible, issues related to active engagement of fathers shall be addressed throughout the design, implementation and evaluation of parenting programmes.

5.3.5 Cultural adaptation

The cultural background of participants is broadly recognised as an influential factor to effectiveness of parenting programmes (Lakind & Atkins, 2018; Mytton et al., 2014; Panter-Brick et al., 2014). Evidence of this issue is mainly based on studies involving ethnic-minority parents in North America. Four of the 47 reviews focus specifically on cultural adaptation of parenting programmes. While Ortiz and Vecchio (2013) argue that ethnicity might not be the most important factor that affects effectiveness of parenting training, the other three reviews underline the importance of carrying out cultural adaptation of parenting programmes for ethnic-minority parents, with evidence showing that culturally adapted programmes are more effective (Baumann et al., 2015; van Mourik et al., 2017; Vesely, Ewaida, & Anderson, 2014).

A number of theoretical frameworks have been employed to inform cultural adaptation of parenting programmes. For example, the Ecological Validity Model (Bernal, Bonilla, & Bellido, 1995) specifies eight domains for adaptation, including language, person, metaphor, content, concept, goal, method and context, while the cultural sensitivity model (Resnicow,

Baranowski, Ahluwalia, & Braithwaite, 1999) categorises two levels of adaptation to programme content, namely, surface adaptation (*e.g.*, translation of materials) and deep adaptation (*e.g.*, modifications made to content and delivery methods). van Mourik et al. (2017) report that parent training programmes with deep adaptation are more effective in improving parenting behaviours of ethnic-minority parents. On the other hand, Baumann et al. (2015) point out that any deep adaptation of parenting programmes should be based on scientific rationale with consideration given to practical issues, such as cost, feasibility and other resources. Likewise, Ortiz and Vecchio (2013) suggest that cultural adaptation should be guided by empirical evidence instead of presumptions and more sophisticated evidence-based models should be developed to address cultural-specific barriers to effective implementation of parenting programmes.

The reviews included in this study agree on the following points:

- a) cultural values should be incorporated into programme adaptation;
- b) local communities and stakeholders should be valued and their voices included to ensure success in the process of adaptation;
- c) on-going improvement in programme cultural sensitivity should be made based on parents' feedback throughout the implementation.

Despite this consensus, it is important to note that the evidence presented above is based on the programme adaptation for ethnic-minority parents living in North American countries, which may be different from the cultural adaptation of parenting programmes in other contexts. Britto et al. (2015) conducted a systematic review of early childhood parenting programmes in low and middle in-come countries. Some of the programmes have been implemented in multiple countries but the issue of cultural adaptation of these programmes is not touched upon in their review. The lack of reviews focusing on worldwide cultural adaption in our literature search may be partially due to the inclusion criteria of English publications. A synthesis of research evidence about culturally adapting parenting programmes across multiple countries will address this knowledge gap.

6. CONCLUSION

By conducting a systematic literature search, this review synthesises the findings of 47 literature reviews of early childhood parenting programmes. Evidence suggests that, overall, parenting programmes have short-term positive effects on various parent outcomes as measured by the programmes. But the positive programme effects on parents do not guarantee positive outcomes of children as mixed evidence has been reported across reviews regarding improvement in children's development. Given a paucity of convincing evidence, more studies are needed to investigate long-term effects of parenting programmes on both parenting and children's development.

Findings of the factors that affect the effectiveness of early childhood parenting programmes are discussed, namely, theoretical frameworks, programme length/intensity, delivery modes, family-centred approach (*incl.*, father-inclusiveness) and cultural adaptation. Based on the findings, we propose a list of practical suggestions about the design and implementation of early childhood parenting programmes in order to enhance effectiveness. The following features are shown to be beneficial to successful outcomes of parenting programmes:

- having a good 'fit' between the chosen theoretical framework(s) and the programme aims/purposes (*e.g.*, the parents' needs)
- adopting an empowering approach to programme design and implementation (*i.e.*, focusing on empowering parents and being inclusive and non-judgmental throughout the programme)
- ensuring parents have a good understanding of the theoretical background (*incl.* theory of change) and the rationale behind the programme
- following a needs-based approach to decide programme length and intensity (*i.e.*, allowing adequate time for change without causing extra burden or stress for parents)
- combining different delivery modes (*i.e.*, making use of the advantages of each format)
- including web- or mobile-based online resources and remote learning elements in the programme, especially for providing ongoing support

- being led by well-trained professionals, who are known to/trusted by parents
- adopting a family-centred approach to encourage parents and other carers to actively engage in the programme either through direct or indirect participation
- having father-inclusive/father-friendly programme content and teaching process which are implemented with caution to avoid reinforcing gender stereotypes in parenting
- including parent-child activities when appropriate
- being adapted to embrace cultural values in local contexts, which is guided by empirical evidence with consideration given to practical issues, such as cost, feasibility and other resources
- including local communities and stakeholders in the process of cultural adaptation
- keeping improving programme cultural sensitivity based on parents' feedback throughout the programme

Limitations

This review focuses on universal parenting programmes that do not require clinical screening for admission into the programme. As a result, the vast amount research evidence of parenting programmes for family at risk or with special needs is not accounted for in this review. According to the differential susceptibility model (Belsky, Bakermans-Kranenburg, & Van Ijzendoorn, 2007), it is not unreasonable to postulate that changes with larger effective size would be observed in parenting programmes for family with special needs than these universal ones. Readers who are interested in specific parenting programmes should refer to corresponding reviews for discrete evidence.

Implications

This review systematically synthesises findings of reviews and meta-analyses of universal early childhood parenting programmes over the past ten years. Based on empirical evidence of programme effectiveness, a list of practical suggestions is proposed regarding the design, implementation and evaluation of early childhood parenting programmes. This review has provided considerable insight into the strategies to promote positive effects of parenting programmes on parents and young children.

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8. APPENDIX

Checklist for developing an effective parenting programme

This checklist is based on a systematic review of reviews and meta-analyses of early childhood parenting programmes (link to CTEY report), which aims at shedding light on the key features of effective parenting programmes.

Although it is not an exhaustive list, we seek to make it as complete as possible. Some features may not be applicable to certain contexts. We recommend users to reflect on these features with reference to the contexts of their programme.

Effective parenting programmes have:

- **Focused programme aim(s) and purpose(s) which**
 - Is based on evidence of what parents need
 - Responds directly to those needs
 - Takes family and community backgrounds (*e.g.*, SES, religion, *etc.*) into consideration

- **Clear theoretical frameworks which**
 - Are a good fit with the programme aims or purposes
 - Target the appropriate audience (*i.e.*, parent, parent and child or whole family)
 - Account for the complexity in parenting as a dynamic and relational process that takes place within a family system
 - Empower parents

- **Need-based programme length/intensity which**
 - Allows enough time for change to happen
 - Cause no extra burden or stress to parents
 - Has certain degree of flexibility in response to parents' progress

- **Versatile delivery modes (e.g., group-based and/or individual-based; face-to-face and/or online) which**

Generally,

- Are suitable for the targeted audience (*i.e.*, parent, parent and child or whole family)
- Are suitable for the programme topic
- Are integrated to provide multi-dimensional support
- Are cost-effective
- Take practical issues into consideration (*e.g.*, parents' child-care responsibility, *etc.*)

More specifically,

- Provide convenient locations and time for parents to attend face-to-face sessions
- Use accessible and user-friendly platforms for online programmes

- **Useful programme contents which**

- Teach a focused message throughout the whole programme
- Take family dynamics into consideration
- Are related to real life situations of the parents
- Are free of stereotypes (*e.g.*, stereotypical roles of mothers and fathers)
- Include discussions about the values and traditions of parents
- Have personalised learning contents that attend to specific needs of individual families
- Provide support for indirect participation of family members (*i.e.*, one caretaker is directly enrolled in the programme while other caretakers in the family will obtain ongoing debriefing and instruction from the enrolled care-taker), for example, programme materials designed for sharing with family members
- Include guidance on parental self-care in the content
- Involve parent-child activities when appropriate
- Provides parents with long-term ongoing support after the programme

- **High-quality programme teaching / facilitation which**

- Is led by leaders/facilitators whose backgrounds are suitable for the programme (*e.g.*, some programmes use experts or professionals, whereas some programmes use parents as leaders/facilitators in peer groups.)
- Has an inclusive and non-judgemental teaching ethos

- Clearly explains (at the beginning) and constantly refers to (throughout the learning process) the theories and rationale underpinning the programme
 - Involve participants in active learning (*e.g.*, role-playing, interactive activities, modelling followed by discussions and reflection, *etc.*)
 - Has tailored teaching element (*e.g.*, session planning according to parents' progress, web functions that allow customisation in online programmes, *etc.*)
 - Provides parents with instant and constructive feedbacks
 - Ensures that the group dynamics are healthy and beneficial for learning in group-based teaching (*incl.* face-to-face and online)
- **Effective professional training for programme leader/facilitator¹ which**
 - Is specific to the programme
 - Helps the leaders/facilitators have a good understanding of the parents' needs and the programme aim(s)/purpose(s)
 - Enables the leaders/facilitators to gain a good knowledge of the theories and rationale underpinning the programme
 - Covers the essential teaching skills and techniques required for successful programme implementation (*e.g.*, group facilitation skills)
 - Includes guidance on self-evaluation of and reflection on teaching process
 - Has a formal evaluation to assess whether the trainee is qualified for teaching the programme after the training
 - Provides the leaders/facilitators with support for continuous professional development
- **Constructive programme evaluation which**
 - Can be conducted internally, externally, or both
 - Examines the outcomes that are suitable for the programme
 - Uses quantitative or qualitative methods, or the combination
 - Adopts both self-report and others-report measures
 - Applies standardised assessments when appropriate without an overemphasis on them
 - Examines the programme implementation (*i.e.*, process quality) in addition to programme outcomes

¹ Some programmes can be self-guided by parents, such as web- and mobile-based parenting programmes.

- Accounts for contextual factors (*e.g.*, SES, religion, *etc.*)
 - Involves long-term assessments whenever possible
 - Informs further refinement of the programme
- **Other relevant elements including**
 - Support for the programme design and implementation at policy or organisational/institutional level

Checklist for adapting a 'borrowed' parenting programme for Chinese parents

This checklist is based on a systematic review of reviews and meta-analyses of international early childhood parenting programmes (link to CTEY report), which aims at shedding light on the key features of effective parenting programmes. The following list can be used to check the cultural adaptation of a 'borrowed' parenting programme for Chinese parents.

Although it is not an exhaustive list, we seek to make it as complete as possible. Some features may not be applicable to certain contexts. We recommend users to reflect on these features with reference to the contexts of their programme.

Before adaptation, it is important to examine whether the programme is worth 'borrowing'. Refer to the '*checklist for developing an effective parenting programme*' for the key features of useful programmes. In addition to those features, a worthwhile programme also has:

- Suitable programme aim(s)/purpose(s) that attends to Chinese parents' needs
- Sound theoretical frameworks (*incl.* theory of change) that fit Chinese parents
- Research-based evidence of being adapted for other cultures (especially those that share some similarities as the Chinese culture)

During adaptation, it is important to bear in mind that adaptation does not mean taking away anything that contradicts Chinese culture and traditions, which renders the "borrowing" pointless. Instead, we emphasise cultural comparisons with reflection on the differences. A rigorous adaptation process:

- Involves Chinese stakeholders (*incl.* policy makers, scholars/experts, practitioners, parents and children) so that their voices are listened to/valued
- Reflects on cultural comparison of parenting ideology and practice between China and the cultural context that the programme originates
- Follows the translation and back-translation procedure
- Considers key culturally-specific concepts to accurately deliver meanings beyond literal translation
- Modifies the programme content and teaching methods based on empirical evidence in Chinese contexts
- Takes Chinese values and traditions into consideration

- Takes social and economic factors into account
- Incorporates the adaptation of the accompanied professional training for Chinese programme leaders/facilitators
- Incorporates the adaptation of the evaluative tools for use in Chinese parents and children

After adaptation, it is crucial to carry out the following to steps:

- Carry out empirical research in Chinese contexts to validate the cultural adaptation of the programme (*incl.* accompanied professional training and evaluative tools)
- Improve cultural sensitivity of the programme continuously based on the feedback from programme leaders/facilitators and parents