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COMMUNICATION BRIEF

Parenting programs for child behavioural problems: An evidence based review indicators to assess quality, quantity and participation.

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RESTACKING THE ODDS: PROJECT BACKGROUND

Inequities emerging in early childhood often continue into adulthood, contributing to unequal rates of low educational attainment, poor mental and physical health and low income. In some cases, this experience is part of a persistent cycle of intergenerational disadvantage. Inequities constitute a significant and ongoing social problem and – along with the substantial economic costs – have major implications for public policy.

To redress inequities, research tells us that efforts should be delivered during early childhood (pregnancy to eight years of age) to deliver the greatest benefits. Restacking the Odds focuses on five key evidence-based interventions/platforms in early childhood: antenatal care; sustained nurse home visiting; early childhood education and care; parenting programs; and the early years of school (see *Figure 1: Five Fundamental Strategies*).

These five strategies are only a subset of the possible interventions, but we have selected them carefully. They are notably *longitudinal* (across early childhood), *ecological* (targeting child and parent), *evidence-based, already available* in almost all communities, and able to be *targeted* to benefit the 'bottom 25 per cent'. Our premise is that by 'stacking' these fundamental interventions (i.e., ensuring they are all applied for a given individual) there will be a cumulative effect - amplifying the impact and sustaining the benefit.

Our intent is to use a combination of data-driven, evidence-based and expert informed approaches to develop measurable best practice indicators of quality, quantity and participation for each of the five strategies:

Quality: Are the *strategies delivered effectively*, relative to evidence-based performance standards? A strategy with 'quality' is one for which there is robust evidence showing it delivers the desired outcomes. A large number of research studies have explored aspects of this question (i.e., "What works?"). Therefore, we pay particular attention to the quality dimension in this report.

Participation: Do the *appropriately targeted* children and families *participate* at the right dosage levels? 'Participation' shows us what portion of the relevant groups are exposed to the strategy at the level required to trigger the desired benefit. (For example, attending the required number of antenatal visits during pregnancy). Participation levels can be calculated whether the strategy is universal (for everyone), or targeted (intended to benefit a certain part of the population).

Quantity: Are the strategies *available locally* in sufficient quantity for the target population? 'Quantity' helps us determine the quantum of effort and infrastructure needed to deliver the strategy adequately for a given population.

These indicators will help identify gaps and priorities in Australian communities. We will test preliminary indicators in 10 communities over the next three years to determine which are pragmatic to collect, resonate with communities, and provide robust measures to stimulate community and government action.

The findings summarised in this report provide essential inputs to guide our subsequent work. There is a similar report for each of the five strategies.

FIVE FUNDAMENTAL STRATEGIES

Antenatal	Early childhood		School years
	Birth to 2 years	2-5 years	
1 Antenatal care • Targeted at parents • Centre-based • *Outcomes:* healthy birth weight, good brain health, appropriate care, "adequate parenting"	**3 Early childhood education and care** • Targeted at all children (in groups) • High quality for all children • Delivered out of home in a "pseudo-home-learning environment" • *Outcomes:* children on optimal developmental pathway (cognitive and social-emotional), school readiness		**5 Early years of school** • Targeted at all children • School-based • *Outcomes:* children on optimal learning pathway by Year 3
2 Sustained nurse home visiting • Targeted at disadvantaged parents • Health and development support • Home-based • *Outcomes:* parents develop parenting skills			**4 Parenting programs** • Targeted at parents whose children have behavioural issues (higher prevalence in disadvantaged families) • Centre-based, delivered in groups or 1:1 • *Outcomes:* remedy of specific emerging behavioural issues

Figure 1: Five fundamental strategies

PARENTING PROGRAMS FOR CHILD BEHAVIOURAL PROBLEMS: RESEARCH SUMMARY

OVERVIEW

The early years of childhood are critical for the development of good health, cognition, and social-emotional wellbeing [1]. The strongest potentially modifiable influence on children's development is the quality of the home learning environment and the parenting they receive [2, 3]. Parenting (and the associated social-emotional attachment and bonding) and the home learning environment contribute to important aspects of child development including self-esteem, academic achievement, cognitive development and behaviour (e.g. [4-7]). In particular, parenting quality and child behaviour are closely linked. Research has shown that poor parenting quality is the single most important environmental factor to influence a young child's behaviour – it has almost twice the negative effect on child developmental outcomes of other known risks such as an impoverished environment [8]. Similarly, child behavioural problems can be challenging for parents and are related to maternal negative behaviour and stress (e.g. harsh, abusive, controlling, uninvolved or rejecting parenting, low self-esteem, and lack of confidence) (e.g. [9]). Experimental evidence shows that intervening early to improve parenting and reduce the risk of child behavioural problems can produce positive and lasting effects on children, in particular for children from families in disadvantaged circumstances. [10-13]. Further, cost-benefit studies show that early childhood prevention and intervention programs that focus on mentoring, parenting, and attachment are cheaper and more effective than later treatment [14].

Definitions

Parenting programs, in the context of this review, include interventions delivered to the parent with the aim to prevent, improve, or optimise child behaviours or emotional outcomes. Interventions may include teaching parents behavioural strategies to increase desired behaviours and decrease unwanted ones, emotion socialisation and sensitivity practices, and enhancing awareness and thinking skills to help parents cope with challenging parent-child interactions.

Externalising behavioural problems include oppositional defiance, antisocial behaviour and aggression, while *internalising* behavioural problems include emotional problems such as anxiety and depression. Children who display behavioural problems are at increased risk of developing learning difficulties, academic underachievement, peer relationship problems, delinquency, and even severe and long-lasting mental health disorders (e.g. [15-17]). Typically, behaviour becomes a problem when it is severe enough to interfere with a child's day-to-day functioning. This usually occurs in at least two of the home, educational, and social settings. Previous research suggests that up to 50% of untreated behavioural problems present at preschool age persist through to adulthood [18-20].
A *program* is a well-defined curriculum of interventions designed for the needs of a specific group or population. Programs are often discrete, manualised curriculums (i.e. written manuals that are structured, and thus repeatable), or a series of actions, tasks and behaviours designed for a particular population to meet particular outcomes, which are usually measureable [21, 22].

For the purpose of this report, a *parent* is defined as a person performing the role of primary caregiver to a child. This person may be different from the person who is the child's biological parent, for example it could include grandparents, step-parents, foster parents, or other carers.

Prevalence

National data from the Longitudinal Study of Australian Children (LSAC) suggest that approximately 12%, 16%, and 9% of children aged 2-3 years, 4-5 years, and 6-7 years respectively, experience behavioural, emotional, and/or social problems [23]. Data from Victoria show that children from families with low socioeconomic status, with special needs, or whose parents have a mental health problem, are at higher risk for behavioural problems, and the prevalence is more than double that of the general Victorian population [23].

Effect of parenting on child outcomes

Specific associations have been reported between child behavioural problems and maternal negative behaviour and stress. Poor parental attachment and responsivity is related to an increased risk of a range of adverse cognitive, emotional and physical health outcomes, including but not limited to: impaired language acquisition, behavioural and conduct disorders, antisocial and risk-taking behaviour, mental health issues and cardiovascular health problems [24-26]. Whereas overly protective parenting contributes to child emotional problems [25, 27], children who experience warm, supportive parenting are less likely to develop antisocial behaviours. This remains true for children from disadvantaged backgrounds (i.e. poverty, low socio-economic status) [28].

The costs associated with behavioural problems

The consequences of child behaviour problems are far-reaching and often sustained. Behavioural and emotional problems have associated social and financial costs on criminal justice systems and clinical treatment services, as well as suboptimal workforce participation, which cumulatively impose a considerable financial burden on society and undermine productivity [29]. In the US, the estimated quantifiable cost of mental, emotional and behavioural disorders was $247 billion in 2007 [30].
In acknowledgement of Australian data that shows that the prevalence of child behavioural problems is relatively high and that poor parenting quality is the single most important environmental factor to influence a young child's behaviour, it is important to identify effective parenting interventions that prevent or address behavioural problems.

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AIM

This restricted review of the peer-reviewed evidence base for parenting programs addressed two questions:

1. Which parenting programs have a positive effect on child behavioural and emotional problems?
2. What population is most likely to benefit from participation in a high quality parenting program and at what dosage-level?

METHOD

Our literature review utilised a restricted evidence assessment (REA) methodology. The REA is a research methodology that uses similar methods and principles to a systematic review but makes concessions to the breadth and depth of the process. Rigorous methods for locating, appraising and synthesising the evidence related to a specific topic are utilised by the REA; however, the methodology places a number of limitations on the search criteria and in how the evidence is assessed.

Peer-reviewed literature

We sought to identify meta-analyses, systematic reviews and randomised controlled trials (RCTs) between January 2006 and January 2017 from the peer-reviewed literature, with the aim of identifying effective parenting programs.

Grey literature

We also conducted a grey literature search. Grey literature refers to unpublished or not commercially published written material [31]. We focused on several well-known international and Australian evidence databases.

Ranking the evidence

Each systematic review, meta-analysis and RCT that met the inclusion criteria was subject to a quality and bias check. In consideration of the accumulated evidence across different studies, we assessed the strength of the evidence base for each parenting program (see Appendix A for full details). The criteria are adapted from The California Evidence-based Clearinghouse for Child Welfare [32]. Two independent raters made this assessment, and consensus reached in the event of any rating discrepancy.

- *Supported*. Clear, consistent evidence of benefit.
- *Promising*. Evidence suggestive of benefit but more evidence needed.
- *Evidence fails to demonstrate an effect.*
- *Unknown*. Insufficient evidence or no effect.
- *Concerning practice.*

Expert evaluation of draft indicators

We asked two Australian experts to comment independently on the developed list of supported parenting programs, and sought their input on potential indicators for quantity and participation.

- *Annette Michaux.* Director Parenting Research Centre.
- *Robyn Mildon*. Executive Director Centre for Evidence and Implementation.

FINDINGS FOR PARENTING PROGRAMS

The studies identified by the search strategy included preventative and targeted behaviour treatment programs. The search identified eighty-eight parenting programs. Most programs had only one research paper that met our selection criteria in the published literature from 2006-17, so most failed to meet the evaluation criteria for Supported (i.e. replication) even before individual study data were examined. Limiting the review to RCTs means that studies using non-experimental methods to evaluate parenting programs, such as cultural adaptations of effective programs have been excluded.

Of the eighty-eight programs, nine were rated as 'Supported', sixty-one as 'Promising', six as 'Evidence fails to demonstrate effect', seventeen as 'Unknown', and none as 'Concerning practice'. See Appendix B for the full list of parenting programs, and the full technical report ([33]) for full details of the related evidence.

Quality indicators

Nine parenting programs met the criteria for 'Supported'. These programs are supported by RCT-based evidence, have shown replicability, and show maintenance effects for at least six months. Our conclusion is that these programs meet the standard of quality required to be effective, when implemented according to the parameters under which they were evaluated (including program objective, child age, format, duration and intensity, and provider qualifications). We summarise them briefly below; additional detail is provided in Appendix C.

We identified six of these programs via the peer-reviewed literature:

Family Check-Up

Family Check-Up is effective at improving child behaviours, parenting skills, mental health and wellbeing.

Incredible years

The Incredible years parenting program was effective at improving child disruptive and problem behaviours and child mental health, a range of parent outcomes (parenting, parent mental health and wellbeing, and parent relationship), and parent-child interaction.

Parent-Child Interaction Therapy
This program is effective at reducing child problem behaviours (externalising and internalising), parent-child interaction, and parenting skills and mental health and wellbeing.

Parent Management Training – Oregon Model
This program is effective at reducing child problem behaviours and parenting skills, including step-fathering.

Triple-P Parenting Program
This program is effective at improving child disruptive and problem behaviours and internalising symptoms, and a range of parent outcomes (parenting, parent mental health and wellbeing, and parent relationship).

Tuning into Kids
This program is effective at improving child behaviour and emotion knowledge and improving parenting skills.

We identified the three remaining 'Supported' programs via the grey literature:

Child-Parent Psychotherapy:
This program is effective at reducing child behaviour problems and stress, and increasing levels of secure attachment. In mothers, it has been effective in decreasing stress and reducing avoidant symptoms.

Common Sense Parenting:
This program is effective at reducing child externalising behaviours and behavioural problems, and increasing parent satisfaction and efficacy.

Community Parent Education Program (COPE)
This program is effective at improving child behaviour, and improving parenting skills and mental health and wellbeing.

Quality indicator
The parenting program is one of the nine 'Supported' programs, and is implemented according to the best practice parameters associated with that program.

Table 1: 'Supported' Parenting Programs

The nine 'Supported' Parenting Programs and their implementation parameters					
Program	**Objective**	**Child age**	**Format**	**Duration and intensity**	**Provider qualifications**
Child-Parent Psychotherapy	Treatment	0 to 5 years	Parent-child dyad	52 weekly sessions (1 year) of 1-1.5 hour	Masters level training
Community Parent Education Program (COPE)	Prevention and/or treatment	3 to 12 years	Group sessions	10 weekly sessions of 1 hour (up to 25 parents)	Paraprofessional
Common Sense Parenting	Prevention and/or treatment	6 to 16 years	Group sessions	6 weekly sessions of 1 hour (8-10 parents)	High school or Bachelor (specific training for credentials)
Family Check-up	Prevention (targeted at at-risk families)	2 to 3 years	Individual families	3 weekly or fortnightly sessions of 1 hour	Masters degree + clinical experience
Incredible Years – Basic Parent Training Program	Prevention and/or treatment	2.5-12 years	Group sessions	14 weekly sessions of 2- hours	Masters level (or equivalent) clinicians
Parent-Child Interaction Therapy	Treatment	2 to 7 years	Individual parents	5-7 weekly sessions of 1-2 hours	Masters degree
Triple P – Level 4	Prevention and/or treatment	2-16 years	Group + Individual phone sessions	8-9 weekly sessions of 2-2.5 hours	Triple P accredited facilitator
Tuning into Kids	Prevention and/or treatment	4 to 6 years	Group sessions	6 sessions of 2 hours + 2 two-monthly boosters	Unspecified
Parent Management Training – Oregon Model	Prevention and/or treatment	2 to 18 years	Individual families	10-25 weekly sessions of 1 hour	Bachelors degree with appropriate clinical experience

Participation Indicators

We sought to determine the portion of the general population that should participate in parenting programs, and the relevant dosage level (i.e. number of hours or sessions). We were unable to find any specific evidence for the optimal participation rate but there are data related to the at-risk population that would likely benefit from participation in a Supported parenting program.

Target Population

As noted in the introduction, data from the longitudinal study of Australian children suggest that approximately 12%, 16%, and 9% of children aged 2-3 years, 4-5 years, and 6-7 years respectively experience behavioural, emotional and/or social problems [23]. This rate is consistent with data from the Australian Child and Adolescent Survey of Mental Health and Wellbeing, which found that approximately one in seven (14%) of children aged 4-17 years experienced a mental disorder [34]. An Australian longitudinal population-based survey also demonstrated similar rates of behaviour problems: externalising behaviour problems for children aged 18 months were (9.5-13.1%), 24 months (12-12.5%) and 36 months (8.7-14.2%) [35] and the prevalence of internalising behaviour problems were 18 months (4-5.2%), 24 months (7.4-10.2%) and 36 months (11.1-13.6%)[35]. Data also show that these rates are higher for children from families with low socioeconomic status [23, 34].

Although it is true that children under 2 years might be at-risk for behavioural problems it is often too young for a diagnosis. Furthermore, most parenting programs are designed for parents with children from age 2 years. There is other support in place for families with children under 2 years experiencing disadvantaged, such as nurse home visiting programs.

For the purposes of measurement we estimate the target population to be 12% of children 2-8 years and more than this in disadvantaged areas.

Dosage level

Most studies provided some attendance data (such as the proportion who attended at least 1 session, or who attended x sessions). However, the type of data collected, attendance rates and the way it was analysed varied greatly between studies making comparisons between studies difficult. The focus of the included RCTs was on program effectiveness, and so variables related to participation were not systematically manipulated to determine optimal participation thresholds.

Of the studies that reported any attendance information, the mean portion of sessions attended by parents who showed positive effects on child and parent outcomes was as follows:

- Triple P: 40-96% attendance of 8-9 sessions
- Incredible Years: 55-92% attendance of ~14 sessions
- Tuning into Kids: ~80% attendance of 6 group sessions and ~50% of 2 booster sessions
- Parent-Child Interaction Therapy: 76-86% attendance of ~6 sessions
- Family Check-up: 100% attendance of 3 sessions
- Parent Management Training – Oregon Model: not adequately addressed

The California Evidence-based Clearinghouse for Child Welfare did not provide specific detail on the mean attendance for Child-Parent Psychotherapy, Common Sense Parenting or COPE.

The literature did not provide any clear data to determine what the threshold for participation should be for any given program. Based on the available data, we have assumed that the parameters outlined in each specific parenting program is the intended dose and approximate level of attendance required to gain a positive effect, although as illustrated above the attendance level varied widely across studies and programs.

In view of this, we have defined the participation indicator as follows.

Participation indicator
The proportion of targeted families (i.e. those with 2-8 year olds experiencing behaviour problems) enrolled in a Supported parenting program who attend at least 85% of the program's sessions.

Quantity indicators

Our search strategy did not yield any relevant studies related to quantity, and Australia does not have a national measure for parenting program availability.

The determination of required quantity of parenting programs in a given community is a function of the size of the relevant population, the portion of the population who would benefit from participating, and the effort required to provide the right standard of care. This is largely a practical consideration, not research question, and there are two practical dimensions related to quantity:

- Is there sufficient program capacity to serve the demand? i.e., the number of parenting program places per defined population (approximately 12% of children aged 2-8 years).
- Is there a sufficient qualified workforce? i.e., the number of qualified parenting program facilitators.

Our quantity indicator addresses both of these dimensions:

Quantity indicator
The number of places available in Supported parenting programs led by qualified facilitators, relative to the target population

CONCLUSION

We have established an evidence based set of indicators for best practice indicators of parenting program quality, participation, and quantity.

Quality

We identified nine specific parenting programs, which were tested in good quality RCTs and demonstrated effectiveness on at least one child outcome.

> **Quality indicator**
> The parenting program is one of the nine 'Supported' programs, and is implemented according to the best practice parameters associated with that program.

Participation

The literature did not provide any clear data to determine what the threshold for participation should be for any given program. Based on the available data, we have assumed that the parameters outlined in each specific parenting program is the intended dose and approximate level of attendance required to gain a positive effect.

> **Participation indicator**
> The proportion of targeted families (i.e. those with 2-8 year olds experiencing behaviour problems) enrolled in a Supported parenting program who attend at least 85% of the program's sessions.

Quantity

The key consideration for quantity is where there is sufficient infrastructure to support the relevant population to attend parenting programs.

> **Quantity indicator**
> The number of places available in Supported parenting programs led by qualified facilitators, relative to the target population

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APPENDICES

Appendix A: Overall ranking of the evidence

EVIDENCE RANKING	
	Definition
Supported	Clear, consistent evidence of benefit. No evidence of harm or risk to participants. A well conducted systematic review or meta-analysis (++ or +) or at least two RCTs found the intervention to be more effective than a control group on at least one child or parent valid outcome measure. A positive effect was maintained for at least 6 months.
Promising	Evidence suggestive of benefit but more evidence needed. No evidence of harm or risk to participants. At least one RCT found the intervention to be more effective than a control group on at least one child or parent valid outcome measure.
Evidence fails to demonstrate effect	A well conducted systematic review or meta-analysis or at least one RCT found the intervention to be ineffective compared with a control group. The overall weight of the evidence does not support the benefit of the practice.
Unknown	The data reported across trials is inconsistent. One or more RCTs show a high level of bias. There are insufficient trials to provide an evaluation of the evidence-base.
Concerning practice	At least 1 RCT of low risk of bias where the practice has shown to have no effect or a negative effect sustained over at least 1 year.

Appendix B: Parenting programs categorised by evidence level

PARENTING PROGRAMS CATEGORISED BY EVIDENCE LEVEL	
	Definition
Supported	• Child-Parent Psychotherapy • Common Sense Parenting • Community Parent Education Program (COPE) • Family Check-up • Incredible Years (standard) • Parent Management Training – Oregon Model • Parent-Child Interaction Therapy • Triple P – Level 4 • Tuning into Kids
Promising	• 1-2-3 Magic parenting program – DVD version • 1-2-3 Magic parenting program – Emotion Coaching version • 3 sessions targeting modifiable parenting risk factors (parent outcomes) • A CBT & educational program (parent outcomes) • Behavioural Parent Training (child outcomes) • Being Brave (modified version of Coping Cat program) • BRAVE ONLINE for Children • Bringing Up Great Kids • Child FIRST • Circle of Security – Parenting (parent outcomes - limited) • COMET (COmmunication METhod): Parent Management Training – Practitioner Led • COMET (COmmunication METhod): Parent Management Training - Self-directed • Connect • Cool Little Kids • COPEing with Toddler Behaviour • Defiant Children: A clinician's manual for assessment and parent training • Discussion Group + Phone consultation • Early Pathways Program • EFFEKT (Enhancing the development of families) (parent outcomes) • Emotional Attachment & Emotional Availability (Tele-intervention) • Empowering Parents, Empowering Communities • Exploring together • Family Foundations • Family Spirit • FAST – Elementary School Level • Healthy Start Home Visit Program • Helping the non-compliant child • Hitkashrut

Appendix B: Parenting programs categorised by evidence level (continued)

Promising	• Home Start (parent outcomes) • Home-based Intervention Program for VLBW infants • Incredible Years – Abbreviated version 10 weeks • Incredible Years – Abbreviated version 8 weeks • Incredible Years – High dose • Incredible Years – Standard + Advanced • Incredible Years – Standard + Child Therapy • Incredible Years – Standard + Classroom • Incredible Years (Modified) – Targeting multiple family risk factors • Intensive Behaviour Therapy • Mother-Infant Transaction Program (child outcomes) • New Forest Parenting • Online Parent Management Training • Parent-Child Interaction Therapy (Modified) - culturally tailored version (Mexican American families) • Parent Effectiveness Training (PET) • Parenting Matters (child outcomes) • Parenting your Hyperactive Pre-schooler Program • Pathways Home • Planned Activities Training (PAT) + Cellular Phone Enhanced (CPAT) • Playsteps • Practitioner Led Circle of Security – Home-visiting • Queen Elizabeth Centre – intensive group education • Self-help book • Strongest Families Smart Website • The Chicago Parenting Program • The Korean Parent Training Program • Toddlers Without Tears (parent outcomes - limited) • Triple P – Online • Triple P – Self-directed • Triple P – Self-directed, Therapist-assisted • Turtle program • Video-feedback Intervention to promote Positive Parenting (VIPP) • Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD) (parent outcomes) • Video-feedback Intervention to promote Positive Parenting with a Representational focus (VIPP-R) (parent outcomes)
Evidence fails to demonstrate effect	• Toddlers Without Tears (child outcomes) • Home Start (child outcomes) • Circle of Security – Parenting (child outcomes) • COACHES program • Clinic-based Intervention Program for VLBW infants • Video-feedback Intervention to promote Positive Parenting with a Representational focus (VIPP-R) (child outcomes) • A CBT & educational program (child outcomes)

Appendix B: Parenting programs categorised by evidence level (continued)

Unknown	• 1-2-3 Magic parenting program – Parent & Teacher version • 1-2-3 Magic parenting program – Parent-only • Active Parenting • Brief parent-implemented language intervention • Group Parent Curriculum (Parenting the Strong-Willed Child) • Incredible Years (Modified) – Abbreviated version 6 weeks • Lou & Us • Making Choices and Strong Families Program • Parent-Child Interaction Therapy (Modified) - PCIT-Emotion Development • ParentCorps • Preparing For Life Program • Primary Care - Triple P • Self-directed program (Every Parent's Self-Help Workbook) • Self-directed program + Practitioner (Every Parent's Self-Help Workbook) • SNAP girls connection • Specific Nurse Home Visitation • Triple P – community-wide approach • Triple P (Modified) – culturally tailored version (Australian Indigenous families)
Concerning practice	None identified

Appendix C: Evidence Summary. Supported Parenting Programs

There were only nine parenting programs that met the criteria for Supported. We summarise the findings for each below.

Family Check-up

The Intervention: The Family Check-Up (FCU) is a brief individual family support program offered in the home or community centres for families screened as 'at risk' [36]. The FCU promotes positive family management and addresses child and adolescent adjustment problems.

Implementation: The studies evaluated are consistent with recommended parameters and facilitator qualifications. There is a manual that describes how to implement the program and there is also training available.

Results: There were four good quality trials that examined the effect of FCU intervention compared with a control group. All four trials reported improved child behaviour (oppositional, destructive) and two trials reported at least one benefit for caregivers; two improved parenting (proactive parenting, involvement), one maternal depression symptomology. Benefits were sustained for 5.5 years for child outcomes and for 2 years for parent outcomes. The Family Check-up was rated as Supported.

Summary
Family Check Up is effective at reducing child problem behaviours and parenting skills and mental health and wellbeing.

Incredible years

The Intervention: The Incredible Years program is a series of three separate, multifaceted, and developmentally based curricula for parents, teachers, and children [37]. This series is designed to promote emotional and social competence; and to prevent, reduce, and treat behaviour and emotional problems in young children. The parent, teacher, and child programs can be used separately or in combination. There are treatment versions of the parent and child programs as well as prevention versions for high-risk populations. The focus of this review was on programs that include parents.

Implementation: The studies evaluated are consistent with recommended parameters and facilitator qualifications [32]. There is a manual that provides detail about how to implement the program as well as course training. Modified or other non-standard versions of Incredible Years were evaluated and ranked separately.

Results: There was one meta-analysis identified that examined the effectiveness of the Incredible Years parenting training program in reducing child disruptive behaviour and improving child prosocial behaviour [38]. A reduction in child disruptive behaviour was found to be significantly better in the intervention group compared with controls immediately post intervention, as was prosocial behaviour. The meta-analysis was rated low quality with high risk of bias, so the results should be interpreted with caution.

There were an additional 13 RCTs identified that evaluated the effectiveness of the Incredible Years program on improving child and parent outcomes. All but three of the trials were rated as good or moderate quality. Three trials did not find a benefit of the program for child outcomes and all but two trials reported at least one positive outcome for parents. Intervention effects ranged from immediately post-test to 2 years post intervention. The Incredible Years program was therefore rated as Supported.

Summary
The Incredible years parenting program was effective at improving child disruptive and problem behaviours and child mental health, a range of parent outcomes (parenting, parent mental health and wellbeing, and parent relationship), and parent-child interaction.

Parent-Child Interaction Therapy

The Intervention: Parent-Child Interaction Therapy (PCIT) is a treatment program for preschool to early primary school children (2 to 7 years) with externalising behaviour problems [39]. The program aims to improve authoritative parenting, for example, nurturance, good communication, and firm control. It also incorporates play therapy and behaviourist principles, which focus on strategies that best suit the developmental characteristics of the child.

Implementation: Program developers recommend one or two hour sessions per week for between 10 and 20 sessions, depending on when the parent masters the interaction skills and the child's behaviour has improved to within normal limits [32]. The studies included in this analysis only offered 5-7 weekly sessions, however the PCIT program was also identified in the grey literature search and is well supported by the evidence (i.e. pre 2006 data). Facilitators should have at least a Master's degree and licensed as a mental health provider – specific training in this program is also available [32]. There is a manual that provides detail about how to implement the program.

Results: Four trials were identified that assessed the efficacy of PCIT and three of these were of good quality. All studies reported at least one positive child and parent outcome in comparison to a control group (usual care or a waitlist) and benefits were reported from post-test to 6 months post intervention. Specifically, problem child behaviours such as aggression and externalising behaviours reduced after

intervention, child-parent interaction improved, and a range of parent outcomes also improved, including parenting (e.g. laxness) and parent mental health and wellbeing. This parenting program was therefore rated as Supported.

Summary
Parent-Child Interaction Therapy is effective at reducing child problem behaviours (externalising and internalising), parent-child interaction, and parenting skills and mental health and wellbeing.

Parent Management Training – Oregon Model

The Intervention: Parent Management Training – Oregon Model (PMTO; [40]) is a parent training intervention that can be used in different family contexts including two biological parents, single-parent, re-partnered, grandparent-led, reunification, and foster families. PMTO can be used as a preventative program or a treatment program.

Implementation: The studies evaluated are consistent with recommended parameters, child target age, and facilitator qualifications/training. There is a manual that describes how to implement the program and there is also training available.

Results: There were 5 studies identified that examined the effectiveness of the PMTO – 3 separate cohorts. One of these reported positive outcomes for child and parent immediately post intervention [41] and at least one child outcome was maintained at 12 months post intervention. No outcomes were maintained at twelve months for parents [42]. A separate cohort were followed up at six, twelve, and twenty-four months with none reporting any main outcomes for children and only observed step-father-child interactions was found to improve at six and twelve months post intervention, i.e., prosocial and coercive parenting (negative reciprocity, negative reinforcement, and negative and hostile engagement) [43]. The other cohort showed that children whose parents received the intervention demonstrated improved adjustment, behaviour problems, depressive symptoms, and social skills eleven months post intervention [44] there was no evidence of a main effect for factors related to parenting [45]. The PMTO intervention was also identified in the grey literature search (CEBC) and was rated as "well-supported by the research evidence" and therefore was included in our Supported programs list.

Summary
Parent Management Training – Oregon Model is effective at reducing child problem behaviours and parenting skills, including step-fathering.

Triple-P Parenting Program

The Intervention: The Triple-P Parenting Program (Triple P) aims to improve social, emotional, and behavioural development in children aged up to 16 years, whilst also enhancing parent satisfaction and efficacy [46].

Implementation: The studies that evaluated Triple P Level 4 are consistent with recommended parameters and facilitator qualifications [32]. There is a manual that provides detail about how to implement the program. Modified or other non-standard (level 4) versions of Triple P were evaluated and ranked separately.

Results: There were three meta-analyses identified in our search strategy that specifically evaluated the effectiveness of the multilevel Triple P program. Two that examined Triple P across any of the 5 levels and were of high quality and low risk of bias [47, 48]. Positive post-treatment effects were found for children's social, emotional and behavioural outcomes, parenting practices, parenting satisfaction and efficacy; parental adjustment; parental relationship, and observed child behaviour. Effects were maintained at follow-up (range: 2 to 36 months).

There were 8 trials identified by the peer-reviewed search that examined the effectiveness of the Triple P program on child behaviour and parent outcomes. All reported positive outcomes for at least one child outcome and almost all for parent outcomes (7 of 8 studies). Several studies reported sustained benefits (6 months, up to 1 years for child outcomes and 4 years for parent outcomes). Of the 8 studies 6 were rated as low bias (high quality), nonetheless due to the overall strength of the evidence, including two high quality meta-analyses Triple P was rated as Supported.

Summary
The Triple P parenting program was effective at improving child disruptive and problem behaviours and internalising symptoms, and a range of parent outcomes (parenting, parent mental health and wellbeing, and parent relationship).

Tuning into Kids

The Intervention: Tuning into Kids is a prevention and early intervention parenting program designed as a group format for parents of preschool children (4 to 6 years), to focus on parental emotion socialisation practices with the expectation that children's emotional knowledge, regulation, and behaviour will improve as a result [49]. The program has the additional aim of improving parents' emotion awareness and regulation so that parenting is calmer and more sensitive, attuned and responsive, leading to an improved parent–child relationship and the prevention or amelioration of child behaviour problems.

Implementation: The studies evaluated are consistent with recommended parameters and facilitator qualifications [32].

Results: There were three good quality trials that evaluated the Tuning into Kids program. Two trials reported improved child behaviour and emotion knowledge and all three trials reported a range of positive parenting outcomes. Effects were sustained for 4 to 6 months and thus overall Tuning into Kids was rated as Supported.

Summary
The Tuning into Kids parenting program was effective at improving child behaviour and emotion knowledge and improving parenting skills.

The following four parenting programs were identified via the grey literature and thus individual study findings are not summarised, with the exception of one paper examined for the COPE program.

Child-Parent Psychotherapy

The Intervention: The Child-Parent Psychotherapy (CPP) is a treatment program for trauma-exposed children aged 0 to 5 years. The program involves working with the child and the primary caregiver together as a dyad. The aims of the program are to address externalising/internalising symptoms of the child and negative attributions and maladaptive parenting. Treatment also focuses on contextual factors that may affect the caregiver-child relationship (e.g., culture and socioeconomic and immigration related stressors).

Implementation: The recommended parameters are weekly 1 to 1.5 hour sessions for 52 weeks (1 year). Providers of CPP are required to be practitioners with at least Master's level training and supervisors must have a Master's degree plus a minimum of 1 year training in the model.

Results: There were no peer-reviewed studies identified in the search that evaluated the CPP program. It was however found to be supported according to the CEBC evidence database and so was also added to our list of Supported parenting programs.

Summary
Child-Parent Psychotherapy has been shown to be effective at reducing child behaviour problems and stress, and increasing levels of secure attachment. In mothers it has been effective in decreasing stress and reducing avoidant symptoms.

Community Parent Education Program (COPE)

The Intervention: COPE is designed to help all parents develop skills to strengthen their relationships with their children, increase cooperation, and solve problems. COPE uses a modelling approach to problem-solving where facilitators assist groups of 15-25 parents develop solutions to common parenting problems. Skill development focuses on culturally and developmentally relevant factors, which also helps build parent confidence. COPE uses readings, videotapes, small group problem solving discussions, demonstrations, practice exercises, and homework projects to help parents develop skills. The target group is parents of children aged 3-12 years with disruptive behaviour.

Implementation: There was only one peer-reviewed study identified in our search which was conducted over 10 weeks and included one hour weekly sessions of up to 25 parents. There was very little information described about the facilitator. Equally the California Evidence-based Clearinghouse for Child Welfare did not provide any additional detail about the implementation specifications.

Results: There was one trial identified, which was of good quality. Positive findings were noted for child behaviour and for parenting skill and mental health. Although there was no follow-up data available, COPE was also identified through the grey literature search and was supported by the evidence and was thus included in the Supported list.

Summary
Evidence shows that COPE is effective at improving child behaviour and parenting skills and mental health and wellbeing.

Common Sense Parenting

The Intervention: The program aims to improve children's behaviours through teaching positive behaviours, social skills, and methods to reduce stress in crisis situations. The program provides parents of 2-16 year olds with practical strategies for enhancing parent-child communication.

Implementation: The recommended parameters are weekly one hour group sessions for 6 weeks. Providers can be high school diploma, although a Bachelor's degree is preferred. There is a manual that describes how to implement the program and there is training available [32].

Results: There were no peer-reviewed studies identified in the search that evaluated the Common Sense Parenting program. It was however found to be supported according to the CEBC evidence database and so was also added to our list of Supported parenting programs.

Summary
Common Sense Parenting has been shown to be effective at reducing child externalising behaviours and behaviour problems and increasing parent satisfaction and efficacy.

RESTACKING THE ODDS

THE TEAM

Restacking the Odds is a collaboration between three organisations, each with relevant and distinctive skills and resources:

Murdoch Children's Research Institute (MCRI) brings deep knowledge and credibility in the area of health and educational research, along with a network of relevant relationships

Prof Sharon Goldfeld – Deputy Director Centre for Community Child Health and Co-group leader Policy and Equity, Royal Children's Hospital and Murdoch Children's Research Institute

Dr Carly Molloy – Research Officer and Project Manager, Murdoch Children's Research Institute

Social Ventures Australia (SVA) brings expertise in providing funding, investment and advice to support partners across sectors to increase their social impact

Nicholas Perini – Principal, SVA Consulting

Bain & Company brings expertise in the development of effective strategies that deliver real results

Chris Harrop – a senior partner, and a member of Bain's worldwide Board of Directors

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