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E Tipu e Rea

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Brief Evidence Reviews for the Well Child Tamariki Ora Programme

Report submitted to MoH on 11 December 2019

Whakapūpūtia mai ō mānuka,
kia kore ai e whati

Cluster the branches of the manuka,
so they will not break

Foreword

The Ministry of Health is responsible for the development of policy advice on children's health and the future direction of the Well Child Tamariki Ora (WCTO) programme. The WCTO programme is the universal health service in New Zealand, which is responsible for protecting and improving the health and wellbeing of children from birth to 5 years of age. This is achieved through health and development screening and surveillance, whānau care and support, and health education.

The current programme is based on the evidence available at the time of the last programme update in 2007. Therefore, the Ministry of Health is reviewing the current WCTO Framework and associated Schedule (developed in 2002) to ensure that WCTO services meet the current needs of children and their whānau, and address the issues they face. The present review was initiated in 2019 and is the second review of the programme, as the first was carried out in 2006. In preparation for this review, the Ministry of Health has commissioned an evaluation of the recent literature on some of the new and emerging issues for preschool children, as well as possible ways to address them.

The purpose of this review includes ensuring that the programme is underpinned by the latest research and evidence. This is particularly pertinent to the current Schedule of Universal Contacts delivered, and one of the work-streams of the review is to consider the timing, content, and intensity of the Schedule, and associated additional contacts. This work stream will support the development of an integrated framework of universal wellbeing contacts for the pregnancy to 24 years of age life course.

The Ministry of Health require the brief evidence reviews (BERs) to synthesise relevant evidence about what works in key areas for children, including development, vision, hearing, emotional and mental health, and growth. The BERs adopted the He Awa Whiria – Braided Rivers approach and include consideration of what will work for Māori tamariki and whānau, and Pacific children and families within each domain. The BERs have helped to identify any knowledge gaps where further work and research may be needed, to inform further development of the WCTO programme.

The WCTO review is a key health contribution to the Government's Child and Youth Well-being Strategy. It forms part of the Ministry of Health's work programme to transform its approach to supporting maternal, child, and youth well-being.

The Ministry of Health have commissioned A Better Start: E Tipu E Rea National Science Challenge to undertake 11 health related BERs that will inform the WCTO review and decision making on the future core service schedule, and additional health and social services for children in New Zealand. The aim of the BERs is to ensure that decisions are grounded in, and informed by, up-to-date evidence. BERs are intended to synthesise available evidence and meet time constraints of health care decision makers. Internationally health technology agencies have embraced rapid reviews, with most agencies internationally offering these alongside standard reviews. These 11 BERs that we have conducted have been performed in a very short time which was a very challenging task.

A Better Start is a national research programme funded by the Ministry of Business Innovation and Employment (MBIE). The objective of A Better Start is to improve the potential for all young New Zealanders to lead a healthy and successful life. To achieve this, A Better Start is researching methods and tools to predict, prevent, and intervene so children have a healthy weight, are successful learners, and are emotionally and socially well-adjusted. A Better Start consists of more than 120 researchers across 8 institutions.

The BERs cover 11 domains critical to the WCTO programme, which are: neurodevelopment (#1); parent-child relationships (#2); social, emotional, and behavioural screening (#3); parental mental health problems during pregnancy and the postnatal period (#4); parental alcohol and drug use (#5); excessive weight gain and poor growth (#6); vision (#7); oral health (#8); adverse childhood experiences (#9); hearing (#10); and family violence (#11). The BERs have synthesised relevant evidence about what works in key areas for children across these domains, which were assessed with careful consideration of what will work for Māori tamariki and whānau and Pacific children and families. They have also identified knowledge gaps where further work and research may be needed to inform further development of the WCTO programme.

Within each domain, a series of 6–14 specific questions were drafted by the Ministry of Health, and subsequently refined with input from the large team of researchers assembled by A Better Start. A Better Start established discrete writing teams to undertake each BER. These teams largely consisted of a post-doctoral research fellow and specialty expert, often in consultation with other experts in the field. Subsequently, each BER was peer reviewed by at least two independent experts in the field, as well as two Māori and a Pacific senior researcher. In addition, senior clinical staff from the Ministry of Health have reviewed each BER. These were then revised to address all the feedback received, checked by the editors, and finalised for inclusion in this report.

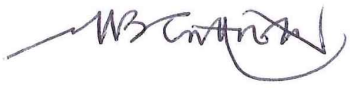
Whilst each of these domains are reviewed as discrete entities, there is considerably inter-relatedness between them. In particular, neurodevelopmental problems can be impacted by parent-child relationships, parental mental health, and pre- and postnatal drug exposure. Similarly, children who have problems with growth, vision, or oral health may also have neurodevelopmental disorders.

Most of the evidence available for these BERs comes from international studies with limited data from New Zealand, in particular there is limited information about Māori, Pacific, and disadvantaged families. These are the tamariki and whānau in whom the WCTO Programme services are more scarce, yet could potentially offer the greatest benefit.

The criteria for screening include the requirement for an effective and accessible intervention; the corollary is that screening should not be offered if there is no benefit to the individual being screened. The essential issue is therefore to identify those infants and preschool children and their whānau who would have better outcomes following intervention; this includes better outcomes for the whānau.

The current WCTO programme has had a greater emphasis on surveillance rather than screening. Many of the questions in the BERs address screening. A change in the WCTO programme that further extends into screening will require substantial upskilling of many WCTO providers, as well as redirection of resources. Importantly, Māori and Pacific iwi and community views must be considered before any new screening programmes are to be included.

It should be noted that a shift towards screening rather than surveillance may prevent health and behavioural problems. The economic benefits of prevention and early intervention are well documented, with early interventions showing that for every dollar spent there are substantial savings to health, social services, police, and special education resources.



Professor Wayne Cutfield
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On behalf of the editors, authors and reviewers of the brief evidence reviews

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2 Parent-child relationships, including caregiving and attachment

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Disclaimer

This brief evidence review was commissioned by A Better Start National Science Challenge (the Challenge) on behalf of the New Zealand Ministry of Health. It was prepared over a relatively short time based on the evidence available to the authors at the time of its preparation. The authors have made considerable efforts to perform a comprehensive and balanced evaluation of the existing evidence. However, this brief evidence review cannot be considered an exhaustive analysis of the existing peer-reviewed and grey literature on the topic, and it may not reflect the potentially conflicting views of all experts in the field. There could have been important omissions, and additional evidence might have also come to light since completion of this final draft. Thus, this brief evidence review should be considered with the appropriate caution. A previous version of this document was peer-reviewed by Māori and Pacific researchers and by independent experts in the field. Peer reviewers were anonymous, unless they have otherwise been identified by name. Please note that this brief evidence review does not represent the views of the Challenge or the Ministry of Health; rather, it reports the independent conclusions of the listed authors.

Conflicts of interest: N Richards has no financial or non-financial conflicts of interest to declare. T Cargo coordinates Training in Parent-Child Interaction Therapy, but has no other conflicts of interest to declare.

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Abbreviations

ASD	Autism Spectrum Disorder
ASQ-SE	Ages and Stages Questionnaires-Social-Emotional version
CHDS	Christchurch Health and Development Study
DSED	Disinhibited Social Engagement Disorder
MCAST	Manchester Child Attachment Story Task
MICS	Mother-Infant Communication Screening
NBO	Newborn Behavioural Observation
NCAST	Nursing Child Assessment Satellite Training
PCIT	Parent Child Interaction Therapy
PIRGAS	Parent–Infant Relationship Global Assessment Scale
RAD	Reactive Attachment Disorder
UK	United Kingdom
VIPP	Video-feedback Intervention to promote Positive Parenting

Summary

- The quality of the first relationship between parent and child can promote or hinder emotional development and influence later health and personality development.
- Parent-child relationship problems may be identified by observing the interaction between the parent and the infant in addition to considering potential risk factors for relationship problems.
- There is poor evidence for the use of screening tools to specifically identify parent-child relationship difficulties.
- Diagnostic tools such as the Strange Situation Procedure have good reliability and validity however their use requires significant specialist training and they are most appropriate in clinical settings.
- There are a number of interventions available in New Zealand with robust evidence that directly address the parent-child relationship, including Parent-infant psychotherapy, 'Watch Wait Wonder', Circle of Security, Newborn Behavioural Observation System and Video-feedback Intervention to promote Positive Parenting.
- Interventions that directly address parenting capacity (parenting programmes) include Mellow Parenting, Parent Child Interaction Therapy (PCIT), the Incredible Years programme and the Triple P programme.
- Disorganised attachment is a significant predictor of later psychopathology however it is still unknown whether interventions in infants lead to significant improvements in childhood/adolescence.
- Potential harms of screening include the assumption that a disorganised attachment pattern is a sign of child maltreatment.
- There is very limited research addressing Māori and Pacific peoples parent-child relationships.

Foreword

Parent-child relationship difficulties are not specifically screened for in the current Well Child Service. However, there is evidence that the quality of the first relationship between parent and child can promote or hinder social-emotional development and influence later health and personality development. Given the importance of this first relationship, a focus on supporting and promoting warm, loving, and sensitively responsive parenting should be a priority. Here, options for recognising relationship problems early and interventions suitable for children under 5 years of age are discussed. It should be noted that term 'parent' is used throughout the text, and encompasses any primary caregiver of an infant/child, including mother, father, and foster/adoptive parents.

2.1 Background

There is now substantial evidence that the quality of the first relationship[1] between parent and child can promote or hinder social-emotional development and influence later health and personality development[2-4]. Given the importance of this first relationship, a focus on supporting and promoting warm, loving and sensitively responsive parenting should be the priority[4,5]. Interventions can occur right from birth, fit within a strengths based[6,7] and whānau ora approach[8], and are economically more viable and effective delivered early in the life cycle[9,10].

Bowlby's (1969) theory of attachment[11] proposed that the bond between a mother and her infant is based on an emotional connection. When an infant becomes fearful or distressed, his primary attachment figure(s) serve as a source of protection and comfort, and he learns to turn to that person(s) in times of need. Complementary to the theory of attachment is the caregiving system. This system is activated by cues associated with situations that the parent perceives as frightening, dangerous, or stressful for the child, motivating them to provide assistance, comfort, and support[12].

Types of attachment

Ainsworth[13] a student of Bowlby, developed a system based on the different patterns of attachment infants' show to specific attachment figures (Table 2.1). Disorganisation is the most detrimental and requires specialist interventions. Bakermans-Kraneburg and colleagues (2005) conducted a meta-analysis (15 interventions; 842 children) to investigate whether disorganised attachment could be prevented. Interventions which started after the infant was 6-months-old and where the focus was on sensitivity showed a small but positive effect size[14], while other interventions showed either no effect or a negative effect size. Later Cyr and colleagues (2010) conducted a meta-analysis, with 55 studies (4,792 children) and found that maltreated children and children exposed to five or more socioeconomic risks were less secure and more disorganized than other high-risk children[15].

Table 2.1. Attachment behaviours

	Approximate prevalence*	Characteristic behaviours
Secure attachment (B)	60%	• comforted by their caregivers when distressed • use their caregiver as a 'secure base' from which to explore their environment
Insecure avoidant attachment (A)	20%	• manage their own distress and do not strongly signal a need for comfort • avoid contact with the caregiver after a brief separation
Insecure ambivalent attachment (C)	15%	• are not quickly calmed when comfort is offered and are less confident at exploring their environment • very distressed and may be angry when they are separated from a caregiver and then resist contact when the caregiver returns
Disorganised attachment (D)	5%	• contradictory behaviour with caregiver; possible episodes of freezing, apprehension and fear • distressed by separation but then does not seek out caregiver when they return

Table based on Ainsworth 1979[13] and a 2015 report from the British Psychological Society and The Royal College of Psychiatrists[16].
** Cultural variations have been identified.*

2.2 How do you identify parent-child relationship difficulties and disorders in infancy and early childhood?

In order to maintain a focus on promoting warm, loving and sensitively responsive parent-child relationships a traffic light approach is taken. In this approach the focus can be on promotion (green light) prevention (orange light) or intervention (red light).

Table 2.2. Infant and parent risk factor screening

FACTORS	GREEN LIGHT	ORANGE LIGHT	RED LIGHT
Parental	• Mentally Well • Confident as a parent • Appropriate emotion responsitivity • Ability to talk and resolve problems, including reflective capacity • Ability to provide warm, sensitive caregiving	• Showing signs of mental stress/distress • Some emotional lability • Difficulties with communication and/or problem solving • Caregiving environment appears anxious	• Mental health diagnosis, substance misuse[17,18], personality disorder[19 20], abuse or trauma[21,22], psychotic disorders[23] • Little self-reflective capacity [24] • Caregiving environment is inconsistent [25]
Infant	• Resilience [26] • Easy temperament [27]	• Fussy and difficult to soothe • Crying without resolution • Difficult regulatory processes	• Prematurity[28] • Chronic conditions[29] • History of abuse or severe adversity[30] • Temperamental factors[31,32] • Behavioural problems[33]
Environmental	• Liveable income • Higher education • Family support • Access to support services	• Changeable income • Limited opportunities for educational improvement • Unstable family support • Few community services available	• Poverty[34,35] • No parenting education[36] • Family stress[37] • No community services
Cultural	• Strong cultural identity • Ability to speak your own language • Cultural supports	• Insecure cultural identity • Limited cultural supports	• Lack of cultural identity[38] • Transgenerational trauma[39] • Unable to access cultural supports • Exposure to racism[40]
Relational Qualities	• Mutually responsive interactions and emotional availability[41,42] • Warm tone and connectedness[1,43] • Security[4,44] • Reciprocity observed in relationship[45]	• Missed opportunities for mutual gaze • Limited warm interactions • Few 'delight in each other' moments • Interactions are mistimed • Cues are responded to intermittently	• No or very few moments of mutual interaction[45] • Insensitivity[42] • Inability to resolve distress[46] • Intrusive interactions[47]

2.2.1 Identify parent-child relationship problems by observing the interaction between the parent and the infant

Relationship problems can also be assessed indirectly by examining the primary caregiver's sensitivity to the child, particularly in response to the child's distress or fear, because a significant association has been found between maternal sensitivity and a child's security of attachment[16].

Maternal behaviour that is warm, consistent, sensitive and predictable promotes secure attachment relationships. 'Atypical' parenting behaviours during the postnatal period are associated with attachment problems and may be observed while seeing a mother and baby. These include communication errors (e.g. mother positive while infant distressed), disorientation (frightened expression or sudden complete loss of affect) and negative-intrusive behaviours (mocking or pulling infant's body)[22]. Disrupted (e.g. lack of response or insensitive), frightening, threatening or dissociative parenting behaviours have a strong association with disorganised attachment at 12 to 18 months of age[48].

Because of the importance of infants' primary caregiving relationships for development and psychopathology, the emphasis in assessing and treating young children includes a major emphasis on assessing the qualities of infants' primary caregiving relationships as useful indices of their overall psychological adaptation and well-being[49].

What suitable screening tools for parent-child relationship difficulties are available?

There are some potential screening tools that could be used to examine the relationship further. However there is poor evidence for their use and limited specificity for parent-child relationship difficulties.

The Ages and Stages Questionnaires-Social-Emotional version (ASQ-SE)[50] is a promising screening measure of social-emotional-behavioural competencies and problems designed for a wider age range, from birth to 66 months. It covers self-regulation, compliance and affect, among other domains and is in routine use by family nurses in the UK[51]. The ASQ-SE is sufficiently sensitive to detect social emotional/ behavioural problems in community samples[52] and has been designed to be completed by a range of individuals, including primary care health workers and caregivers. While it does is not specifically identify attachment or relationship difficulties, a high score may indicate a concern[53].

The Parent–Infant Relationship Global Assessment Scale (PIRGAS; Zero to Three, 1994) provides a continuously distributed scale of infant–parent relationship functioning, ranging from 90 (well adapted) to 10 (dangerously impaired). The PIRGAS also assesses three components of the infant–parent relationship: behavioural quality of the interaction, affective tone and psychological involvement. It seeks to capture the functioning of the mother and child independently. There have been small studies which have used the PIRGAS such as a predictive measure[54] as a comparison measure[55] and as part of a multimodal assessment[56].

The Parenting Stress Index (a short form version also exists)[57] evaluates the extent of stress parents experience in the childrearing role. It has been used widely in research and this has shown that elevations on the PSI suggest increased stress in parent-child interactions and an increased likelihood of the child displaying or developing behaviour problems in this parents' care.

The NCAST Teaching Scale (NCAT) is a possible option for screening parent-child interactions during infancy and toddlerhood in a timeframe and manner that could be feasible for brief clinical encounters[58].

What assessments are available for diagnosing attachment difficulties and disorders?

Attachment disorders such as Reactive Attachment Disorder (RAD) and Disinhibited Social Engagement Disorder (DSED) are defined in the DSM-5. Disordered attachment is defined by specific patterns of abnormal social behaviour in the context of ''pathogenic care''[59]. These disorders are rare and are mostly only observed in children who have experienced extreme neglect or institutional care. Diagnosing attachment disorders requires serial observations of the parent-child interactions, observations of the child with unfamiliar adults, and a comprehensive history of the child's early caregiving environment (including corroborating evidence from other sources e.g. doctors, teachers, social workers)[60].

The most commonly used clinical measures of attachment are: the Strange Situation Procedure[61]; the Attachment Q-Sort[16,62]; the Preschool Assessment of Attachment[63]; the Emotional Availability Scales[42] and the Manchester Child Attachment Story Task (MCAST)[64]. All require a high level of specialist training.

2.2 Summary

- ***Parent-child relationship problems may be identified by observing the interaction between the parent and the infant, in addition to considering potential risk factors for relationship problems.***
- ***There is poor evidence for the use of screening tools to specifically identify parent-child relationship difficulties.***
- ***Diagnostic tools such as the Strange Situation Procedure have good reliability and validity, but their use requires significant specialist training, and they are most appropriate in clinical settings.***

2.3 Are these screening and assessment tools appropriate for infants and young children with developmental concerns?

Some researchers have found that children with medical or physical problems (e.g. neurological abnormalities or Down's syndrome) are at risk for elevated rates of disorganized attachment[65]. However, although children with neurological problems may have some similar behaviour patterns to children with disorganised attachment, these behaviours occur for a different reason and can be a "false-positive" for disorganised attachment[14,66,67]. Children identified as being delayed developmentally or with other potential health problems (e.g. early signs of autism) may require more advance assessment by a paediatrician or child psychologist. A systematic review[68] reported lower levels of secure attachment (47%) in young children with autism spectrum disorder (ASD), despite parents showing equally sensitive caregiving compared with parents of children without ASD. More severe ASD symptoms and developmental delay may be associated with less secure attachment. However the function of attachment is the same in children with ASD. Best practice assessment tools may still be appropriate, and both the caregiving and attachment systems should be assessed given the child's developmental complexities. In addition, infants born with disabilities can create additional stressors for families as they have to come to terms with the challenges required for caring for an infant with special needs[69] and be able to maintain a reflective mental state[32].

2.4 What interventions are effective for parent-child relationship disorders/difficulties?

Parenting interventions with robust evidence and those that are available in New Zealand are discussed below.

2.4.1 Interventions that directly address the parent-child relationship

Parent-infant psychotherapy aims to improve the parent-child relationship by means of a psychotherapist listening to and observing the parent-child interaction and enabling the parent to respond more freely and sensitively to their infant[70]. A systematic review evaluated the effectiveness of parent-infant psychotherapy in improving parental and infant mental health and the parent-infant relationship. They included eight studies comprising 846 randomised participants including women with postpartum depression, anxious or insecure attachment, maltreated, and prison populations. They compared parent-infant psychotherapy with no treatment or to other kinds of parent based or relationship based treatment and found that although parent-infant psychotherapy appeared to be a promising model of improving infant attachment security in high risk families, there were no significant differences for other outcomes[70].

'Watch Wait Wonder' is a programme that encourages the parent to 'Watch, Wait, Wonder' about their infants' play and interactions. The therapist helps the mother clarify and alter distorted perceptions and to link her current experience of motherhood with her childhood experience, via observation and explanations[71]. Watch, Wait, Wonder is effective for improving the parent-child relationship (attachment assessed), child regulation and development, reducing parenting stress, reducing parent-infant conflict, and maternal intrusiveness. Gains were held at 6 months follow-up[71,72].

Circle of Security involves the use of video feedback techniques. The interaction between parent and baby is filmed. The tape is then viewed by the therapist and parent and the therapist uses the videotape to point out examples of positive parent-infant interaction (there is also a group based model) A meta-analysis examined the efficacy of the Circle of Security intervention in relation to child attachment patterns, quality of caregiving, caregiver self-efficacy, and caregiver depression. A total of 10 studies (428 parents) were included for analysis. They found a medium effect size for the efficacy of the intervention for child attachment security, quality of caregiving and reduction of caregiver depression. There was a significant large effect for improved caregiver self-efficacy. However the findings from this meta-analysis are limited by the lack of treatment versus control analysis[73].

Mellow Bumps is an antenatal group programme that aims to improve the mother-infant relationship. There is currently only qualitative evidence of participants' experiences of the programme suggesting that parents find it beneficial[74,75].

The Newborn Behavioural Observation (NBO) System involves brief demonstrations (7-10 minutes) of the infant's perceptual and interactive capabilities by a trainer. A recent meta-analysis assessed the effects of the NBO system for improving caregiver-infant interaction and related outcomes in caregivers and newborn babies. They included 16 RCTs in the review but all were at high risk of bias. They found evidence for the effectiveness of NBO in terms of improving parent-infant interaction for mostly low-risk, first-time caregivers and their infants, however this was based on very low-quality evidence[76].

Video-feedback Intervention to promote Positive Parenting (VIPP) targets parents and infants that are at risk of an insecure attachment relationship. Videotaped interactions between mothers and their 6-

month-old infants are reviewed with a therapist and then discussed with the parent, emphasising positive interactions. Four studies found a significant impact on maternal sensitivity but there is less evidence that it improves children's attachment security[77-80].

2.4.2 Interventions that directly address parenting capacity (parenting programmes)

Mellow Parenting was designed for hard to reach mothers, particularly those living in poverty, or who are depressed and socially isolated[81]. It uses videos, parent-child activities and a parenting workshop with practitioners working with parents to build strengths. One meta-analysis calculated an effect size based on five studies (95 parent–child dyads and 55 comparison dyads). There was evidence of a medium effect size in favour of Mellow Parenting compared with the control on maternal well-being and child problems. However, data were heterogeneous and there was evidence of methodological bias[81].

Parent Child Interaction Therapy (PCIT) is an evidence-based intervention for a range of child behaviour and emotional problems for children aged 2-12 years of age. It involves two components: a child directed interaction; and a parent directed interaction component. One large meta-analysis evaluated PCIT and Triple P, individually and against each other. Both interventions reduced parent-reported child behaviour and parenting problems. The effect sizes for PCIT were large when outcomes of child and parent behaviours were assessed with parent-report[82]. PCIT also has Toddler version for 12-24 month old infants. A pilot study of 29 children aged less than 2 years showed a range of positive child and parental outcomes including, reduced disruptive child behaviours, decreased parental depression and high levels of consumer satisfaction following the PCIT-Toddler treatment program[83].

There are three different versions of the Incredible Years programme, the Baby Programme, Toddler Programme, and the Preschool Programme. The intervention aims to improve parent–child interactions, build positive parent–child relationships and attachment, improve parental functioning and encourage less harsh and more nurturing parenting. A meta-analysis of the Incredible Years parent training programme examined 50 studies that included 4,745 participants. It found improvements in both children's disruptive behaviour and prosocial behaviour. However the review included studies that involved children older than five years[84].

The Triple P system incorporates five levels of intervention with the aim of preventing and treating social, emotional, and behavioural problems in children by enhancing the knowledge, skills, and confidence of parents. A large systematic review and meta-analysis of the multilevel Triple P-Positive Parenting Program system included 101 studies and 16,099 families with children ranging in age from birth to 18 years (mean 5.85 years)[85]. They found significant positive effects on child and parent outcomes including children's social, emotional and behavioural outcomes, parenting practices, parenting satisfaction and efficacy, and parental relationships. Significant effects were found for all outcomes measured long-term. Targeted and treatment approaches were associated with larger effect sizes than universal studies, although significant effect sizes were reported for preventative programmes as well. Another review of Triple P[86] examined 33 studies, the majority (29/33) included children aged 2-5 years. The results showed a significant improvement in behaviour for maternally-reported outcomes but not paternally-reported outcomes. The authors noted a number of sources of potential bias in the included studies. Population approaches of the Triple P programme have been shown to be cost-effective in reducing social and emotional problems of children[87,88].

A Cochrane review[89] investigated whether group-based parenting programmes (including studies of the Incredible Years and Triple-P programmes) are effective in improving the emotional and behavioural

adjustment of young children and in the primary prevention of emotional and behavioural problems. They included 24 trials (n=3,161 parents and their young children; mean age three years and 11 months). Overall, they found low quality evidence that group-based parenting programmes (universal and targeted) can improve the overall emotional and behavioural development of young children however methodological concerns such as unclear risk of bias and small sample sizes mean more research is required to determine whether benefits continue over time.

2.4 Summary

- ***There are a number of interventions available in New Zealand with robust evidence that directly address the parent-child relationship, including Parent-infant psychotherapy, 'Watch Wait Wonder', Circle of Security, Newborn Behavioural Observation System, and Video-feedback Intervention to promote Positive Parenting.***
- ***Interventions that directly address parenting capacity (parenting programmes) include Mellow Parenting, Parent Child Interaction Therapy (PCIT), the Incredible Years programme, and the Triple P programme.***
- ***PCIT, the Incredible Years and Triple P programmes have robust evidence supporting their use.***

2.5 What is the long-term outcome following identification of a parent-child relationship disorder/difficulty in infancy and early childhood, with and without therapeutic intervention?

In populations at low risk of relationship problems, most infants demonstrate a secure attachment style. Some infants (approximately 35%) show some form of insecure attachment pattern, but few go on to develop psychopathology. However, disorganised attachment is a significant predictor of significant later psychopathology[90]. Children with disorganized attachment have been found to have highly significant negative mental health sequelae. Longitudinal studies have suggested that disorganised attachment is linked to hostility and hyperactivity, aggression and oppositional defiant disorder in children, and to dissociative symptoms in 17- and 19-year-olds[90]. Attachment disorders[91] are known to have increased comorbidity with conduct disorders, developmental delay, attention deficit hyperactivity disorder and post-traumatic stress disorder[90].

2.6 Does early intervention lead to significant improvements later in childhood/adolescence?

If a child with disorganised attachment is left untreated the impacts are significant. The Christchurch Health and Development Study (CHDS) found that more frequent parental separation in childhood and adolescence was associated with lower levels of parental sensitivity and warmth, greater over reactivity, and an increased use of physical punishment as a parent, after controlling for a wide range of family socioeconomic and psychosocial factors, and individual child characteristics[92]. Additionally, the attachment style of a parent often predicts the attachment style of the infant[93].

2.6.1 Outcomes in adolescence following intervention

Olds et al.[94] followed up children at age 15 who were involved in the Nurse Family Partnership, which is considered to be an attachment based intervention. In contrast to adolescents born to poor, unmarried women in the control group, those visited by nurses during pregnancy and infancy reported fewer instances of running away, fewer arrests, fewer convictions/ violations of probation, fewer lifetime sex partners, fewer cigarettes smoked per day, and fewer days having consumed alcohol in the last 6 months.

Webster-Stratton et al.[95] examined long-term outcomes for the Incredible Years intervention. Rates of adolescent behaviours (e.g. for indicators such as delinquent acts, substance use, school expulsion rates, and involvement with the criminal justice system) in children from the Incredible Years programme were reported to be consistent with US-based age-related norms for children ages 12 to 19. However, this study was limited by not including an untreated control group, therefore there was no direct comparison of similar children who did not receive the Incredible Years intervention.

2.6 Summary

- ***Disorganised attachment is a significant predictor of later psychopathology, but it is still unknown whether interventions in infants lead to significant improvements in childhood/adolescence.***
- ***While some studies have shown a reduction in negative adolescent behaviours following intervention, more research is required.***

2.7 Are there known harms from screening for parent-child relationship difficulties?

While disorganised attachment is sometimes associated with maltreatment, care has to be taken to ensure that identifying disorganised attachment patterns does not result in the false assumption that a child is being maltreated. Making this assumption is likely to selectively harm already disadvantaged families (e.g. those raised in socioeconomically deprived households, those of cultural or ethnic minorities, those with dysfunction or with functional impairments). Removal of a child from his/her family should not be considered solely due to a child's disorganized attachment to a caregiver[96]. In addition Blank et al. (2015) argue that any tool that is likely to adversely impact on Māori needs to ensure that the social justice issues have been fully addressed[97].

There is also a potential risk that a diagnosis of RAD for a child in care may lead their alternative caregiver (e.g., foster parent) to believe that their child is incapable of forming attachments.

2.7 Summary

- ***Care is required when screening for parent-child relationship difficulties, because assuming that a disorganised attachment pattern is a sign of child maltreatment could potentially harm already disadvantaged children.***

2.8 What do we know from a Māori and Pacific knowledge basis about assessment and intervention in this domain?

We were unable to find any kaupapa Māori studies on Māori attachment, Māori parent-child relationships and no quantitative studies on Māori parenting. However a consistent message across qualitative Māori studies is the requirement that any assessment and intervention for Māori must be generated from within a kaupapa Māori framework[98]. In addition infants must be considered in the context of their whānau[7,99,100] and support services are best serviced by a whānau ora approach[101-103].

Cram (2019) addresses the need for a Māori child wellbeing measure, which is based on kaupapa Māori principles. It is also agreed that the individual child must be viewed within the context of whānau so any assessments must be able to incorporate a whānau systems approach[104]. To date this does not exist within the attachment research although it has been considered[97,105]. She provides a possible framework, for tracking wellbeing, infants and the parent-child relationship is not considered.

The ability to recognise that the infants first experience of themselves as cultural figures come about through their parent-child relationship[106]. So ensuring culturally responsive assessment and intervention is important so that principles of kaupapa Māori practices are supported[98].

In New Zealand non-Māori, evidence-based parenting programmes have been culturally adapted and have shown similar positive outcomes as non-Māori. The Mellow Parenting programme has been culturally adapted as Hoki Ki Te Rito[107] and is currently undergoing an open trial. It is the only programme that can be used with 0-3 infants. Parent-Child Interaction Therapy (PCIT) is currently undergoing an open trial after having been trialled with Māori clinicians and whānau[108]. Incredible Years has been culturally adapted as Ngā Tau Miharo[109] and Te Whānau Pou Toru is the name given to cultural adaptation of Triple P, which was evaluated in an RCT. [110]

The values and beliefs of Pacific parents have been described as having a strong focus on obedience without question, and respect for adults[111,112] and a desire for their children to retain their cultural values within their host country. Less is known about how Pacific families define the values associated with their infants.

The Pacific Island Families (PIF) study, provided a longitudinal look at pacific parenting practices, using researchers who were cultural appropriate and bilingual. Borrows and colleagues (2011) found that those with strong alignment to Pacific culture had significantly better infant and maternal risk factor outcomes than those with weak cultural alignment[113]. The Tapuaki pregnancy and parenting programme was piloted between November 2013 and April 2014 in three sites in the Auckland region to test its effectiveness in improving pregnant Pacific women's their partners' and families' knowledge and confidence about pregnancy and parenting. The study reported that parents felt that they increased their knowledge[114] although there is no evidence that this lead to any behavioural or change in relationship factors.

The studies that have been conducted in Māori and Pacific communities tend to be on qualitative aspects of parenting with very few studies having ever been conducted using quantitative methods. Given the over representation of Māori and Pacific infants who live in socioeconomically deprived communities it is crucial that effectiveness studies are conducted on assessment tools and interventions which are based on kaupapa Māori principles.

2.8 Summary

- ***There is very limited research addressing Māori and Pacific peoples parent-child relationships, but qualitative research indicates positive outcomes for culturally adapted programmes.***
- ***Further research into appropriate interventions for Māori and Pacific families is required.***

2.9 Recommendations for further action

Further research

We recommend that further research is carried out in the following areas:

- Screening tools appropriate for use in primary care.
- Outcomes in later childhood/adolescence.
- Assessments and interventions appropriate for Māori and Pacific populations.

2.10 Graded evaluations

2.10.1 Screening Tools

- In the early years parent child relationship problems are best identified by observing the interaction between a child and parent in addition to considering risk factors for relationship problems.
- A number of screening tools have been considered but many either have only low grade evidence or those with more evidence supporting their use have less specificity for identifying relationship problems.
- Screening tools that identify parental factors that contribute to relationship difficulties such as stress are more commonly used.
- Diagnostic tools such as the SSP have strong evidence supporting their use however they require significant training and are more appropriate in clinical settings.

Table 2.3. Graded evaluation of screening tools and associated recommendations for policy and practice.

Screening tool	Grade	Estimated net benefit	Level of certainty	Recommendation
ASQ-SE	C	Moderate	Low	Well-studied screening tool however does not directly assess relationship or attachment difficulties. May identify potential problems in the parent-child relationship when being utilised to assess other aspects of a child's development.
PSI	C	Moderate	Moderate	Useful indicator of parenting stress and relationship difficulties.
PIRGAS	I	Insufficient	Low	Not suitable as a universal screening tool as it requires significant training.
NCAT	I	Insufficient	Low	Not suitable as a universal screening tool as it requires significant training.

Grade: A, B, C, D, or I.
Estimated net benefit: substantial, moderate, small, nil or harmful, or insufficient (evidence).
Level of certainty: high, moderate, or low.
For more detailed explanation see Supplementary Information - Grade definitions and levels of certainty.

2.10.2 Interventions

- Interventions target different aspects of the child-parent relationship including attachment, parental sensitivity, parenting skills and frightening parental behaviour.
- Many have good evidence supporting their use and choosing the most appropriate programme will depend on the age of the child, the presenting problems, and the availability of interventions and comprehensive services.

Table 2.4. Graded evaluation of interventions and associated recommendations for policy and practice.

Intervention	Grade	Estimated net benefit	Level of certainty	Recommendation
Child-Parent Psychotherapy	B	Moderate	High	Aimed at parents with young children (aged 0 to 5 years) who may have experienced relational trauma or abuse. Shown to have a short-term positive impact on child outcomes. Minimal availability in New Zealand.
PCIT	A	Moderate	Moderate	Available for parents with children aged 2 to 12 years. Improves positive parenting, reduces negative parent behaviour and improves child behaviour. Shown to have a short-term positive impact on child outcomes.
Incredible Years (Toddler)	C	Small	Low-Moderate	An effective parenting programme with evidence of short-term positive impact on child behaviour. Research is needed to show improvements in the parent-child relationship.
Incredible Years (3-6 years)	A	Moderate	Moderate	An effective parenting programme with evidence of improved parenting skills and reduced child behaviour problems. Research is needed to show improvements in the parent-child relationship.
Triple P	C	Moderate	Moderate	An effective parenting programme for encouraging positive child behaviour and aimed at infants up to teens. There is evidence of short-term positive impact on child behaviour. Research is needed to show improvements in the parent-child relationship.
Watch Wait and Wonder	C	Moderate	Low-Moderate	Directed to the parent-child relationship, delivered to parents with young children (aged 0 to 4 years). Improved child outcomes for social, emotional and cognitive problems and disorganised attachment. Further research is required.
Circle of Security – parenting	C	Moderate	Low-Moderate	Directed to the parent child relationship. Evidence shows improved inhibitory control and maternal response to child distress. More research is required.
Circle of Security – intervention	C	Moderate	Low-Moderate	Evidence shows increased attachment security in preschool children however other child outcomes are less clear. More research is required.
Mellow Parenting	C	Moderate	Low-Moderate	Hoki te Rito, the kaupapa Māori Mellow Toddler programme, has been found to be culturally acceptable.
Mellow Bumps	I	Insufficient	Low	There is insufficient evidence to determine whether this programme is effective. Currently being used in New Zealand.
NBO System	C	Moderate	Low	Low level evidence supporting this programme's use for first-time parents at low risk.

Intervention	Grade	Estimated net benefit	Level of certainty	Recommendation
VIPP	C	Moderate	Low-Moderate	Evidence shows improved maternal sensitivity and a reduction in the rate of disorganised attachment in at-risk populations. The use of video to promote positive parent-child interaction is widely used in infant and early childhood mental health.

Grade: A, B, C, D, or I.
Estimated net benefit: substantial, moderate, small, nil or harmful, or insufficient (evidence).
Level of certainty: high, moderate, or low.
For more detailed explanation see Supplementary Information - Grade definitions and levels of certainty.

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Supplementary Information - Grade definitions and levels of certainty

Table S1. Grade definitions for screening tools and interventions

Adapted with permission from the U.S. Preventive Services Task Force 2012.[i]

Grade	Definition	Recommendation for policy and practice
A	• The authors recommend this screening tool/intervention. • There is high certainty that the net benefit is substantial.	• This screening tool/intervention should be offered or provided.
B	• The authors recommend the screening tool/intervention. • There is high certainty that the net benefit is moderate, or there is moderate certainty that the net benefit is moderate to substantial.	• This screening tool/intervention should be offered or provided.
C	• The authors recommend selectively offering or providing this screening tool/intervention to patients based on professional judgment and patient preferences. • There is at least moderate certainty that the net benefit is small.	• This screening tool/intervention should be provided for selected patients depending on individual circumstances.
D	• The authors recommend against this screening tool/intervention. • There is moderate or high certainty that the screening tool/ intervention has no net benefit or that the harms outweigh the benefits.	• The authors discourage the use of this screening tool/intervention.
I	• The authors conclude that the current evidence is insufficient to assess the balance of benefits and harms of the screening tool/intervention. • Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	• If the screening tool/intervention is offered, patients should understand the uncertainty about the balance of benefits and harms.

Table S2. Levels of certainty regarding net benefit

Adapted with permission from the U.S. Preventive Services Task Force 2012 [1].

Level Of Certainty	Description
High	• The available evidence usually includes consistent results from well-designed, well-conducted studies in representative populations. • These studies assess the effects of the preventive service on health outcomes. • This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	• The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by such factors as: – the number, size, or quality of individual studies; – inconsistency of findings across studies; – limited generalizability of findings to routine practice; – lack of coherence in the chain of evidence. • As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion(s).
Low	• The available evidence is insufficient to assess effects on health outcomes, because of: – the limited number and/or size of studies; – important flaws in study design and/or methods; – inconsistency of findings across individual studies; – gaps in the chain of evidence; – findings not generalizable to routine practice; – lack of information on important health outcomes. • More information may allow estimation of effects on health outcomes.

[i] https://www.uspreventiveservicestaskforce.org/Page/Name/grade-definitions