Parenting for mental health: what does the evidence say we need to do? Report of Workpackage 2 of the DataPrev project

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SUMMARY
The last decade has witnessed increasing interest in the promotion of mental health and well-being because of its importance for health and social functioning at individual level and for the social and economic well-being of societies. Recent research from a range of disciplines (including neurodevelopment, developmental psychology and genetics) has highlighted the importance of childhood, and particularly the first few years of life, for future mental, social and emotional development. The quality of the parent–child relationship and parenting more generally is one of the factors in determining outcomes. The objective of this review was to identify effective interventions to support parents, parenting and the parent–child relationship from the ante-natal period to adolescence. A systematic search of key electronic databases was undertaken to identify systematic reviews evaluating approaches to parenting support; 52 systematic reviews were identified. Results were synthesized qualitatively and reported under the following headings: (i) perinatal programmes; (ii) parenting support programmes in infancy and early years focused on enhancing caregiver sensitivity and attunement; (iii) formal parenting programmes focused on children's behaviour; (iv) parenting support for highest risk groups. The review provides a robust international evidence base of programmes which have been demonstrated to improve parenting and the mental health and well-being of children. Policies and programmes to support parenting offer much scope for improving mental health. Effective provision requires a skilled workforce and careful application of approaches that have been found to work. More research is needed to develop and identify interventions for some of the highest risk groups.

Key words: mental health; mental health promotion; childhood; mother; fatherhood

INTRODUCTION
The last decade has witnessed an increasing interest in the promotion of mental health and well-being, because of its importance for health and social functioning at the individual level and for the social and economic well-being of societies.

Research from a range of disciplines (including neurodevelopment, developmental psychology and genetics) has pointed to the particular importance of the first few years of life for future mental, social and emotional development (Shonkoff and Phillips, 2000). The quality of the parent–infant relationship is one of the factors in determining these outcomes. Excessive levels of stress, resulting from sub-optimal parenting in the early years, can seriously disrupt the child’s developing nervous system and stress hormone regulatory systems, damaging the developing brain architecture and chemistry (Shore, 2004; Centre on the Developing Child at Harvard University, 2007). These effects influence the child’s neuro-endocrine response to threat, resulting (among other things) in infants who are ‘insecurely
attached’ to their caregivers and at increased risk of problems with peer and intimate relationships (Sroufe, 1995), of future mental illness and of abnormalities of cardiovascular and immune functioning (Repetti et al., 2002; Surtees et al., 2003; Luecken and Lemery, 2004; Bell and Belsky, 2007; Weich et al., 2009).

Over the last half-century a large body of research has emerged which has shifted the balance of belief on the relative influence of nature and nurture, by illustrating just how much parenting influences children’s development. The impact of different approaches to parenting and the quality of parent–child relationships is now known to extend over the life course, and parenting is coming to be recognized as one of the most important remediable determinants of future health, particularly mental health (Repetti et al., 2002; Stewart-Brown and Shaw, 2004; Weich et al., 2009). It is also strongly predictive of a wide range of detrimental health and social outcomes, including antisocial behaviour, delinquency, violence and criminality (Farrington, 1989); educational success and school dropout (Desforges, 2003); health-related behaviours including sexual promiscuity (Scaramella et al., 1998), drug and alcohol abuse (Garnier and Stein, 2002), smoking (Cohen et al., 1994) and unhealthy eating (Kremers et al., 2003); physical health in general and specific common diseases (Stewart-Brown et al., 2005; Bell and Belsky, 2007; Waylen et al., 2008). These aspects of parental nurture also appear to influence nature. Epigenetic studies have demonstrated that the quality of parenting influences the phenotypic expression of individual genes which carry risk for mental disorders (Caspi et al., 2002; Perry, 2002). Parenting is therefore hugely important to children, parents and society.

While parental sensitivity and attunement to infants and children’s needs is very important in the early years, it is evident from the above that parenting also influences outcomes in older children and adolescents. In preschool, school-age children, and adolescents boundary setting, discipline and behaviour management become important alongside parental sensitivity. These attributes of parenting are important in the emergence of conduct disorder, delinquency and violence. Teachers, peers and the wider community also influence outcomes in older children, however, many studies have shown that parenting remains an important determinant of mental health and well-being even at these later ages.

Population-based studies of parenting styles and practices are surprisingly rare, and since parenting is, in part, culturally determined the results of studies carried out in one country do not necessarily transpose across borders. Statistics are available on abusive parenting, but definitions of abuse may vary from time to time and place to place. It is also clear that parenting does not have to be abusive to influence child outcomes. One UK study, which documented health effects of parenting in mid-childhood, identified sub-optimal parenting in a large proportion of the population (Waylen et al., 2008).

The wide range of developmental outcomes which are influenced by parenting has prompted practitioners and researchers in a variety of disciplines to develop interventions and programmes to support parenting. One group—primarily interested in the development of violence, criminality, educational failure and other social problems—has created the classic behaviour management programmes for families with children aged 3 years and up. This is the age when behaviour problems start to emerge and parents need behaviour management skills. These programmes form an important bedrock of parenting support. The best known are offered to groups of 8–12 parents weekly for 10–12 weeks.

Another group of researchers and practitioners has been more concerned with parent–infant relationships in very early life and the health and social effects of attachment disorders. This group has developed psychotherapeutically aware home visiting programmes, and interventions to support parents who are at high risk of problems with parenting, for example teenage parents or those with post-natal depression. While the classic parenting programmes are manualized and standardized, one-to-one home visiting programmes can be more flexible, tailored to individual needs and their length can vary considerably. As programme duration is an important driver of cost, what constitutes most effective length is an important research question. Another driver of programme cost involves the qualifications of the providers. Some programmes are provided by volunteers, others require skilled professionals.

A further group of concerned practitioners and researchers work with families in which children are abused. This involves engaging with parents who have themselves often had
profoundly damaging childhoods, histories of abuse and care, who may also have clinical level mental health problems and/or abuse drugs or alcohol, and be coping with varying levels of social and economic deprivation. Such parents are likely to require more intensive, skilled and longer-term support to improve their parenting than general population or high-risk families. Parenting interventions therefore need to be tailored to some extent to parents’ needs and it is likely that interventions of varying length and intensity will be required to improve population norms in parenting, including low level, low cost approaches suitable for the general population and high-intensity programmes for high-risk groups.

While the bulk of literature on parenting focuses on mothers’ role and care, research increasingly examines the highly significant and overlooked role of fathers (Burgess, 2008).

This paper summarizes the findings of a systematic review of reviews of interventions which aim to support parenting. Reviews of reviews can be wider ranging than reviews of primary studies, covering a much greater variety of programmes. They can also provide robust evidence of effectiveness; several reviews examining different aspects of the intervention literature and coming up with broadly similar conclusions provide strong evidence that these conclusions are valid. Reviews are also good at identifying areas where varying conclusions have been reached by different studies and research questions remain. The review of review methodology is therefore very useful in the context of parenting where it is clear that a wide range of different approaches have been tried and that the intervention literature, while well known to specialists, is not widely known to practitioners in all disciplines with an interest in promoting mental health.

The main drawback of reviews of reviews is timeliness. There is a lag period between the end of a study of an intervention trial and its publication. There is then a further lag between publication of an individual trial and its incorporation into a review. The searches for reviews may be undertaken some time before the publication of the review of reviews creating a further time lag.

Further drawbacks include a lack of detail about interventions. Parenting interventions are diverse and some reviews aim to cover many different approaches. Restrictions on the length of text for journal articles can mean that the reader can be left with the knowledge that something works without being clear what exactly it was. Some interventions with good-quality evidence may not ever be incorporated into systematic reviews because they fall outside the inclusion criteria. All these drawbacks need to be born in mind when interpreting the results of this study.

METHODS

A systematic review of systematic reviews was undertaken as part of Workpackage 2 of the DataPrev project, which aimed to establish a database of evidence-based programmes to promote mental health in Europe. Workpackage 2 covered reviews of intervention studies evaluating the effectiveness of programmes to support parenting and parent–child relationships.

The methods for this review are covered in detail in the full report of this study (Stewart-Brown and Schrader McMillan, 2010). They aimed to identify all systematic reviews of any interventions to improve the relational and behavioural aspects of parenting (mothers and fathers) in general population and high-risk samples. We excluded reviews of reviews. The following international databases were searched from 1990 to 2008 for English language articles: Embase, CINHAL, PsychInfo, Medline, ERIC, ASSIA, Social Services Abstracts, Sociological Abstracts, HealthPromis, Child Data and the Cochrane Database of Systematic Reviews, Campbell Collaboration databases, Google and Google Scholar, using a combination of medical subject headings (MeSH) and free text search. Search terms were adapted for use in the different databases.

To be included reviews needed to cover primary studies, using any methodology, of interventions to improve parenting, in any settings with the exception of programmes delivered through schools. These are covered in the review of reviews undertaken for Workpackage 3 reported in a companion paper in this volume. We excluded reviews of interventions to treat established child mental disorders. Reviews were excluded if they did not include outcomes relating to infant or parental mental health, social and emotional aspects of parenting or aspects of the parent–child relationship.
were selected for inclusion by two reviewers based on information in both abstracts and full papers if the authors defined an explicit, replicable search strategy, predetermined inclusion and exclusion criteria and undertook either a narrative or quantitative analyses. All included systematic reviews were critically appraised using a standard checklist (CASP, 2002). A table of study quality is presented in the full report (Stewart-Brown and Schrader McMillan, 2010). Quality was taken into account in the narrative synthesis of the findings reported in the full study and has informed the conclusions presented in this paper.

We extracted data on the intervention approach and setting, the characteristics of the populations studied, the methodology of the study and outcomes measuring infant or parent mental health, parenting or the quality of parent–child relationships. Data extracted from each of the included reviews have been synthesized using a narrative approach which aimed to group findings related to similar interventions or approaches reported in any review.

RESULTS

Over 5000 studies were identified. Of these, 52 systematic reviews (53 papers) met the inclusion criteria (see Appendix).

The reviews which were identified for inclusion differ in key respects. Some had a highly focused aim (e.g. measuring the impact of media-based parenting programmes) and others more wide-ranging objectives (e.g. assessing the effect of a wide range of interventions on early fathering). Several reviews had findings which overlapped: for example, some included all outcomes in studies of home visiting programmes while others covered a range of interventions, including home visiting, but extracted data only on one outcome (e.g. parental sensitivity). This complex material was organized under four broad headings:

(i) Perinatal programmes including antenatal parenting programmes and perinatal maternal mental health programmes.
(ii) Parenting support programmes in infancy and early years with a focus on maternal sensitivity and attunement, and infant attachment.
(iii) Formal parenting programmes with a focus on children’s behaviour for general population and high-risk groups: including group-based, one-to-one and media-based parenting programmes.
(iv) Parenting support in the highest risk groups where parents have severe mental health problems, are addicted (typically to drugs or alcohol) or are abusing their children.

Perinatal programmes including antenatal parenting programmes and perinatal maternal mental health programmes

This group of programmes covers diverse approaches and interventions. The dividing line between those in this group and that in group 2 is subtle and there is some overlap. We aimed in this group to include programmes that are potentially applicable to all families including prevention, identification and intervention in perinatal depression.

Antenatal classes

Antenatal classes have until recently been one of the central methods of preparing parents for pregnancy and childbirth, but most have focused on the physical aspects of pregnancy child birth and child care. We included reviews that covered outcomes relevant to parent and infant mental health and relationship. Three relevant reviews were identified (Barnes and Freude-Lagevardi, 2003; Magill-Evans et al., 2006; Gagnon and Sandall, 2007). Together they provide limited evidence that antenatal programmes can enhance parenting.

The first (Gagnon and Sandall, 2007) covered traditional antenatal care but included two very small studies which aimed to enhance ‘intrauterine’ attachment by increasing mothers’ awareness of foetal activity and promoting abdominal massage to develop sensitivity to the foetus. Two out of four attachment-based outcomes in these studies showed positive results 2–4 days post-delivery.

Barnes and Freude-Lagevardi was a wide ranging review which included antenatal programmes (Barnes and Freude-Lagevardi, 2003). This review provides some indication that programmes have the potential to improve outcomes such as dyadic adjustment, maternal psychological well-being, parental confidence and satisfaction with the couple and
parent–infant relationship in the post-natal period. This review concluded that antenatal programmes should be responsive to the priorities of participating parents and include sessions addressing: the transition to parenthood, relationship issues and preparation for new roles and responsibilities; the parent–infant relationship; problem-solving and conflict-resolution skills.

Magill-Evans et al. provided some evidence from a small number of studies, that antenatal classes can enhance men’s support for their partner during pregnancy, childbirth and beyond, and prepare men for fatherhood (Magill-Evans et al., 2006).

**Skin-to-skin contact**

One review (Moore et al., 2007) investigated skin-to-skin contact between mother and infant immediately post-partum and found it to be associated with a range of improved outcomes, including mother–infant interaction, attachment behaviours, infant behaviour and infant physical symptomatology in full-term and pre-term infants. Skin-to-skin contact involves placing the naked infant on the mothers’ body at birth. It is now routine practice in many European labour wards.

**Kangaroo care**

Four reviews (Bakermans-Kranenburg et al., 2003; Conde-Aguedo et al., 2003; Dodd, 2004; Magill-Evans et al., 2006) included studies of the impact of parents carrying their infants in slings or pouches. This approach was originally studied as an alternative to incubator care for pre-term infants in developing countries. Two reviews included single trials of kangaroo care in normal weight and low socio-economic status babies. These provide evidence of improved outcomes on measures relevant to attachment and infant regulation for fathers (Magill-Evans et al., 2006) and mothers of low socio-economic status, with infants of normal weight (Bakermans-Kranenburg et al., 2003). Dodd reviewed outcomes of kangaroo care for pre-term babies by mothers and found increased attachment in two out of the three studies that measured this, and evidence of better regulated infant behaviour (Dodd, 2004). Conde-Aguedo et al. found insufficient evidence to recommend kangaroo care as an alternative to hospital care for low-birthweight infants (Conde-Aguedo et al., 2003).

**Advice on infant capabilities and prevention**

One review (Das Eiden and Reifman, 1996) covered the provision of information about the sensory and perceptual capabilities of infants to parents of neonates, the Brazelton Neonatal Behavioural Assessment Scale (NBAS) being the best-known prototype. The NBAS showed a small to moderate impact on parent behaviour, knowledge, parental representations, and increases in mother–infant and father–infant interaction. Further research with NBAS-based interventions is needed to identify the role of moderator variables including the frequency with which the NBAS is administered, and who administers it.

One review (Regalado, 2001) evaluated the effect of physicians and other healthcare workers providing preventive advice (anticipatory guidance) for parents, in healthcare settings during the perinatal period and early infancy. Results indicate that anticipatory guidance with written instructions can be effective in promoting better infant sleep patterns, reducing stress and increasing parents’ confidence during the first 2 months of life, although further studies showed that behavioural modification techniques were not always effective for children with severe sleep problems.

**Infant massage**

Two reviews (Vickers et al., 2004; Underdown et al., 2006) evaluated the effectiveness of infant massage (delivered by the mother or other primary carer) in improving a range of outcomes for both mothers and infants. Infant massage involves the carer gently stroking the infant using rotational movements and sometimes oils, and is used in some special care baby units and more recently in the community, to improve parent–infant interaction, increase parental sensitivity to infant cues and to reduce post-natal depression. Underdown et al. reported that infant massage may improve mother–infant interaction, sleep and relaxation, reduce crying, and have a beneficial impact on a number of hormones controlling stress in healthy full-term babies (Underdown et al., 2006). Concern about methodological quality precluded the possibility of reaching conclusions about the effectiveness of infant massage with
Supporting fathers

A range of interventions have been used to support fathers and promote the father–infant relationship during pregnancy and the postnatal period. We identified one systematic review that specifically focused on fathers (Magill-Evans et al., 2006). This identified potentially effective methods, including—father–toddler play groups, application of the NBAS, infant massage and participative parenting groups with enhanced sessions for men and father–toddler groups. Effectiveness was associated with programmes that involved men’s active participation with and/or observation of their own infants/children and multiple exposures to the intervention. Further research is needed to determine the appropriate dose of effective interventions, impact over time and differential impact of interventions on mothers and fathers.

Maternal depression: prevention, identification and treatment

Prevention. Four reviews [Gamble et al., 2002; Dennis and Creedy, 2004; Shaw et al., 2006; National Institute for Health and Clinical Excellence (NICE), 2007] evaluated the effectiveness of a variety of interventions to prevent the onset of depression among general populations during the perinatal period. Interventions included psycho-educational strategies, cognitive behavioural therapies (CBT), interpersonal psychotherapies, non-directive counselling, psychological debriefing and social support, delivered by telephone, in home visits or group sessions, by professional or lay person. All the reviews confirmed effectiveness of interventions in high-risk groups and ineffectiveness in women in the general population during either the antenatal or postnatal period. Interventions which were effective in high-risk groups included nurse home visiting and peer support (Shaw et al., 2006).

Debriefing is a one-off, semi-structured conversation that is used by psychologists to support individuals who have experienced traumatic childbirth, with the aim of reducing the effects of the trauma and preventing depression. One review (Gamble et al., 2002) concludes that a one-off debriefing session is not effective in reducing psychological morbidity in women who have experienced a traumatic childbirth, and may even be harmful.

Identification. One review (NICE, 2007) included techniques used to identify maternal depression. The predictive power of two measures [the Edinburgh Postnatal Depression Score (EPDS) and ‘2–3 questions’/Whooley questions] is low in general populations but is more sensitive in identifying depression among women who have had a previous episode of depression. The use of ‘2–3 questions’ is more acceptable to women than the EPDS questionnaire.

Treatment. Three reviews focused on the treatment of depression (Gjerdingen, 2003; NICE, 2007; Poobalan et al., 2007) in the perinatal period. These presented evidence that Interpersonal psychotherapy, CBT and listening visits in the home are equally effective for women who have developed symptoms of depression. One-to-one therapy appears to be more effective than group work. Interventions should be combined with patient education about the illness, the intervention and other mechanisms for promoting health such as social support and a healthy lifestyle. Social support (individual, including home visiting, or group-based interventions) is valuable for women who have sub threshold symptoms and who have not had a previous episode of depression or anxiety (NICE, 2007).

The impact of these interventions on infant mental health and mother–infant interaction is less certain (Poobalan et al., 2007), but conversely mother–infant interaction interventions may alleviate some of the symptoms of depression (NICE, 2007).

Parenting support programmes in infancy and early years with a focus on enhancing maternal sensitivity and attunement and infant attachment security

This section covers interventions which have been designed specifically for the purpose of enhancing parental sensitivity and infant attachment in families at risk of problem parenting, and targeted home visiting programmes. Home visiting can be the delivery mechanism for programmes focusing on a wide range of outcomes, including immunization and improved feeding.
but are often also used to influence sensitivity and attachment security and therefore are included here.

**Enhancing sensitivity, attunement, attachment security and trusting parent–child relationships in general**

Three reviews focused on such interventions (Bakermans-Kranenburg *et al.*, 2003, 2005; Doughty, 2007) One further large narrative review (Barnes and Freude-Lagevardi, 2003) covered a very wide range of interventions including many relating to attachment security. Together these reviews also included a small number of studies of general population approaches described above (infant massage, the NBAS and treatment of post-natal depression) so there is some overlap with the reviews reported under ‘Perinatal programmes including antenatal parenting programmes and perinatal maternal mental health programmes’. They covered studies of a wide range of interventions that aimed to promote the development of positive parent–child relationships, sensitivity, attunement and attachment security in children 0–4 years, including one-to-one and group-based programmes, parent training and education programmes, relationship-based programmes, home visiting and centre-based programmes and parent–infant psychotherapy.

The earliest of these reviews (Bakermans-Kranenburg *et al.*, 2003) contained 81 studies, which were coded according to intervention focus as follows—interventions that aimed to enhance sensitivity; interventions that aimed to enhance sensitivity and maternal representations and interventions to increase social support; or any combination of the three. For example, interaction guidance with or without video was used to enhance parental sensitivity; psychotherapy was used to transform maternal representations and in social support interventions, experienced mothers befriended and offered practical help to highly anxious mothers. Several interventions combined different strategies. The meta-analysis encompassed 7636 families and 88 outcomes. The authors found that a variety of types of intervention could enhance maternal sensitivity, and to a lesser extent attachment security. Nearly all of the different approaches involved home visiting to deliver the intervention. Behaviourally focused interventions (including video interaction) delivered one-to-one were found to be effective in increasing parental sensitivity. Infant–parent psychotherapy showed some promise, while group educational interventions generally did not. Results of studies with mothers with post-natal depression were inconsistent.

This review showed that interventions with a clear behavioural orientation which focused on enhancing maternal sensitivity were more effective in increasing sensitivity and infant attachment than those with other orientations (i.e. that focused on support and/or changing maternal representations). The authors suggested that although infant attachment is slower to improve as a result of interventions there may be ‘sleeper’ effects. The review concluded that short-term interventions (with fewer than five sessions) are as effective as those with 5–16 sessions and more effective than interventions of 16 sessions. A later review by the same team (Bakermans-Kranenburg *et al.*, 2005) was restricted to studies which measured disorganized infant attachment (the most disturbed infant response to the strange situation test with the poorest prognosis for the future). This review found no overall effectiveness and possible evidence of harm. Sensitivity focused interventions, however, had a small positive impact.

The third review (Doughty, 2007) covered 18 studies. Although its general conclusions did not differ from those of the two earlier reviews (outlined above), it included several promising psychotherapeutic interventions not covered elsewhere. Parent–infant psychotherapy involves specialists (parent–infant psychotherapists) working with both mother and baby using psychotherapeutic methods to treat a range of problems, including attachment difficulties and abusive parenting. They focus on the relationship between the parent and infant, parental representations and parenting practices. The results of four trials in Doughty showed that parent–infant psychotherapy can be effective in reducing infant-presenting problems, decreasing parenting stress and reducing maternal intrusiveness and mother–infant conflict (Doughty, 2007). The results of one included study also showed improvements in maternal sensitivity, responsiveness and reciprocity and another showed improvements in infant attachment.

A broad-based review (Barnes and Freude-Lagevardi, 2003) included a section on trials of interventions that aimed at enhancing...
It concluded that no single approach is effective with all populations; the quality of the relationship established between caregiver and the practitioner may be more important than the theoretical orientation of the intervention. However, interventions focusing on the positive—enhancing positive mother–infant interaction and enjoyment—with a strengths based, empowering approach were found to be more effective than psychodynamic programmes focusing on problems in the relationship and difficult past life histories. This review concluded that the impact of brief interventions with high-risk families may be short lived, unless these families are offered additional ongoing support, since factors that increase vulnerability also reduce families’ capacity to engage with or respond to interventions. These families are likely to need flexible, multi-modal programmes, grounded in ecological approaches, spanning at least two generations, which respond to individual circumstances. Offering a small number of high-intensity services to a family is likely to be more effective than a large number of low-intensity components. Prenatal contact enhances intervention effectiveness enabling practitioners to attend to primary engagement factors and establish a therapeutic alliance. Weekly contact continuing for the first year appears optimum. Longer term, more intensive psychodynamic therapies are less effective with young high-risk mothers.

**Home visiting programmes**

We identified eight systematic reviews which covered the effectiveness of home visiting interventions on outcomes relevant to this review (Benasich *et al.*, 1992; Ciliska *et al.*, 1996; Roberts *et al.*, 1996; Guterman, 1997; Elkan *et al.*, 2000; MacLeod and Nelson, 2000; MacMillan, 2000; Bernazzini, 2001). One additional review (Kendrick, 2000) presents a focused meta-analysis of studies reviewed in Elkan *et al.* (Elkan *et al.*, 2000). The largest and most comprehensive review of 102 original studies (Elkan *et al.*, 2000) reported positive findings on outcomes relevant to parenting and infant mental health, including parent–child interaction, parental attitudes, maternal mental health and child behaviour. Findings were less positive for infant temperament and only one of ten studies showed a reduction in measures of child abuse. Findings on this measure are equivocal because of the increased likelihood that child abuse, if present, will be detected and reported by home visitors.

Evidence suggests that the effectiveness of home visiting is dependent on a range of process factors such as the intensity and frequency of the service and the skills of the programme provider. Programme effect sizes are stronger for interventions that last for 6 months or more, and that involve >12 home visits. Interventions that begin early (either antenatally or at birth) are more effective than those that begin in later parenthood, as are programmes that are delivered by professionals as opposed to paraprofessionals/lay visitors. Home visiting programmes also appear to be most effective where they are focused on a broad range of outcomes and are multi-focused, targeted, and are of medium to long-term duration.

One review of 18 studies (Guterman, 1997) found evidence that programmes which employed screening for psychosocial risk, reported less good outcomes than those which offer enrolment to all parents with certain recognized demographic risk factors (e.g. youth and poverty).

**Home visiting as an approach to abuse prevention.** Four of the reviews (MacMillan, 1993; Roberts *et al.*, 1996; Guterman, 1997; Macleod and Nelson, 2000) examined the effects of home visiting as a primary preventive intervention for child abuse. Many of the programmes were holistic aiming to influence many aspects of child health. While there is evidence that these programmes can impact on proxy measures of abuse, reviews do not show an overall effect on actual abuse, possibly because home visiting increases the identification of abusive behaviours. Proxy measure trials were more likely to be positive if they were intensive, carried out over 6 months or more, took a strengths based approach and included social support.

**Home visiting for teenage parents.** Letourneau *et al.* focused on home visiting programmes for teen mothers, the most well known of which is the family–nurse partnership (Letourneau *et al.*, 2004). The evidence suggests that multimodal support/education interventions that combine home visiting with other supports can have
positive effects on parenting by young mothers. The most successful interventions begin before, or soon after birth and continue for at least a year, include frequent home visits (e.g. visits two to three times a month) with hands-on parental education, use of video interaction therapy and group-based support and discussions. Such interventions should, as far as is possible, be tailored to meet the needs of individual young parents in terms of their developmental stage, coping strategies and exposure to stressful situations.

**Formal parenting programmes with a focus on prevention of behavioural problems for general population and high-risk groups**

Parenting programmes comprise manualized interventions aimed at improving the capacity of parents to support their children’s emotional and behavioural development. They are underpinned by a range of theoretical approaches, cognitive behavioural training, social learning and relationship-based education being the most common. These approaches are often combined. They may be offered using a range of media (e.g. leaflets, videos etc), on a one-to-one basis, or in groups. Programmes generally last 8–12 weeks. Most programmes have been developed for parents of 3–10 year olds.

Most trials of these programmes recruited participants from demographically high-risk groups, but some recruited general populations, and both individual studies and reviews sometimes combined both. Some studies included parents of children with clinical level behaviour problems alongside high-risk groups.

Twelve reviews examining the effectiveness of these parenting programmes were identified. Ten focused on the impact of programmes on children’s behaviour; two focused, respectively, on maternal mental health (Barlow et al., 2003) and on prevention of abusive parenting (Lundhal et al., 2006a). Two reviews covered all population groups (Serketich and Dumas, 1996; Lundhal et al., 2006b). Five focused on specific risk groups—parents of children aged 0–3 years (Barlow and Parsons, 2003); parents of 3–10 year olds (Barlow, 1999); teenage parents (Coren and Barlow, 2001); parents with intellectual disabilities (Feldman, 1994) and parents from minority ethnic groups (Barlow et al., 2004). Two focused on specific programmes—

on Triple P (Nowak and Heinrichs, 2008); on parent effectiveness training (PET) (Cedar and Levant, 1990) and one on media-based programmes (Montgomery, 2006). In addition, Magill-Evans et al. reported the results of trials of parenting programmes in a review covering a wide range of programmes for fathers (Magill-Evans et al., 2006).

Two reviews (Reyno and McGarth, 2006; Wyatt Kaminski et al., 2008) examined the factors associated with success in parenting programmes, and one (Kane et al., 2007), based entirely on qualitative studies, examined parents’ perceptions of the impact of programmes.

**Children’s behaviour**

Parenting programmes have been shown to have a positive effect on children’s behaviour (Serketich and Dumas, 1996; Lundhal et al., 2006b) particularly in the 3–10 year old age group (Barlow, 1999). One review (Lundhal et al., 2006b) observed greater effects for interventions that included mixed home- and clinic-based provision, involved a range of theoretical approaches, combined group and one to one delivery and high numbers of sessions. Long-term follow-up showed that changes in attitudes were sustained and changes in child behaviour declined in magnitude but persisted. This review concluded that effectiveness of programmes declined with child age, showing most effect for children 5 years and under and least for children over 12 years. Lundhal et al. found relational and behavioural programmes to be equally effective, but that behavioural programmes have been more rigorously tested (Lundhal et al., 2006b).

Another review concluded that the evidence was less strong for the under 3 years (Barlow and Parsons, 2003). However, evidence on the extent to which results are maintained over time is limited because most studies measure only short-term or immediate impact.

**Effects in different population groups**

**Parents from minority ethnic groups.** One review (Barlow et al., 2004) of controlled trials and qualitative studies of parenting programmes with and for parents from minority ethnic groups included formal parenting programmes, culturally specific programmes (such as the Effective Black Parenting Programmes) and
versions of formal parenting programmes [e.g. Systematic Training for Effective Parenting (STEP), PET and Confident Parenting] adapted to different minority ethnic groups. The evidence was most robust for formal parenting programmes. Both quantitative and qualitative studies strongly suggest that these programmes are valuable for parents from different minority ethnic groups. The evidence base to support the effectiveness of culturally specific parenting programmes is not strong. However, this may be because it is easier to evaluate the effectiveness of standard parenting programmes than the more diverse culturally specific programmes. Successful adaptation of mainstream parenting programmes includes (i) sensitivity to traditional childrearing practices (ii) exploring and making explicit the values underpinning the programme and (iii) recognizing diversity in family composition.

Teenage parents. The evidence that parenting programmes are effective with teenage parents is limited. One review (Coren and Barlow, 2001) showed modest effects on parenting efficacy and attitudes, but non-significant effects on children’s behaviour.

Parents with learning difficulties/developmental delay. One-to-one parent-training is effective in improving the care-giving of parents with a learning disability, and should involve specific skill assessment and training, using direct observational techniques and modelling in the home or home-like settings (Feldman, 1994).

Fathers. Magill-Evans et al. included three studies reporting the effects of parenting programmes on fathers (Magill-Evans et al., 2006). One study reported increased father involvement with child care and higher self-reported competence, another reported positive dose effects with fathers who participated more fully showing more positive outcomes and one study showed no effects.

Specific parenting programmes

Triple P behavioural parent training. Triple P is a comprehensive suite of parenting programmes suited for varying levels of need from general population media-based programmes to very high-risk groups (see Discussion). Most studies of this programme involve families at demographic high risk or with clinical indications for intervention. Nowak and Heinrichs found Triple P to produce small to moderate positive effects on parenting, child outcomes and parental well-being. Larger effects were found on parent report as compared with observational measures and more improvement was associated with more intensive interventions and with families who were initially more distressed (Nowak and Heinrichs, 2008).

Parent effectiveness training, PET is a programme suitable for both general populations and high-risk groups. Cedar and Levant reported modest effect sizes overall for this programme, with strongest effects on parents’ knowledge acquisition and smaller ones on attitudes to parenting, and children’s self-esteem (Cedar and Levant, 1990). The importance of trained group leaders was highlighted by the lower effect sizes associated with lack of leader certification.

Media-based parenting programmes. ‘Media-based’ programmes are suitable for general populations and can be offered through written materials, audiovisual resources and electronic media. Montgomery found that such approaches have a moderate, if variable, effect on children’s behaviour, alone and as an adjunct to medication (Montgomery, 2006). Significant improvements were made with the addition of up to 2 h of therapist time.

Impact of parenting programmes on outcomes other than child behaviour

Maternal psychosocial health. Barlow et al. found that programmes with a range of orientations—behavioural, cognitive-behavioural, multi-modal, behaviour-humanistic and rational-emotive therapy—were successful overall in producing positive change in maternal psychosocial health (Barlow et al., 2003). The number of studies precluded examination of effects of specific orientations.

Outcomes relating to abuse. Lundahl et al. found that parenting programmes reduced the risk of parental child abuse measured by parents’ attitudes towards abuse, emotional adjustment, child-rearing skills and actual abuse (Lundahl et al., 2006a). Effectiveness of
interventions was significantly enhanced by combining group training in a group environment outside the home with one-to-one parent training in a home setting. Non-behavioural interventions were more effective than behavioural interventions in affecting parental attitudes associated with increased risk of abuse. However, the reverse was true in terms of effect on child behaviour: behavioural interventions were more effective than non-behavioural approaches. Long-term follow-up showed that changes in attitudes were sustained and changes in child behaviour decli ned in magnitude but persisted.

Engaging and retaining parents
Irrespective of the type of programme being provided, engagement and retention of parents is an important factor in success. Several reviews have noted the importance of understanding reasons for attrition, particularly in trials involving high-risk groups—teenage parents, those at risk of abuse, those who abuse drugs and alcohol and those who have been convicted of abuse. Several reviews also commented on the need for skilled facilitation to achieve success.

Reyno and McGarth reviewed 11 studies which reported on dropout from programmes in order to identify key predictors (Reyno and McGarth, 2006). In a meta-analysis, she identified low family income, low maternal education, young maternal age and minority group status as predictors. Parental psychopathology was also an important predictor of dropout. This reviewer also examined impact on outcomes and found a similar pattern of influence with greater effect sizes.

Wyatt Kaminski synthesized the results of 77 studies in families with children 0–7 years aiming to identify the impact of different programme components (i.e. content and form of delivery) on the behavioural adjustment of children aged 0–7 (Wyatt Kaminski, 2008). This review found that programmes with the most positive outcomes focused the parent–child relationship and specifically (i) taught emotional communications skills and ways of fostering more positive parent–child interaction; (ii) taught use ‘time out’ and consistency; (iii) had a curriculum or manual and (iv) required that parents to practice new skills with their children during sessions. Contrary to what might have been expected, the effectiveness of programmes was not improved by inclusion of adjunctive components, such as problem-solving techniques, a focus on the development of children’s academic and cognitive and social skills and/or provision of additional services and supports.

Kane et al. provides a different perspective on factors influencing success in a meta-ethnographic review of qualitative studies which analysed parents’ own views (Kane et al., 2007). The need for parents’ own needs to be recognized and respected, combined with non-judgemental, strengths based support from programme facilitators were identified as key. Support and acceptance by other parents (which can require skilled facilitation) is critical to retention of participants and the success of the intervention. It is therefore essential to offer non-judgemental, strengths based support and encourage the development of support among participating parents.

Parenting support in the highest risk groups
The highest risk groups are those in which parents suffer from mental illness or drug and alcohol misuse and families in which abuse has already occurred. In the latter interventions aiming at secondary and tertiary prevention aiming to reduce some of the most harmful effects on the mental health of offspring and escalation or recurrence.

Abuse and neglect
Five reviews were relevant to this area: MacLeod and Nelson studied prevention and treatment of physical and emotional abuse and neglect (MacLeod and Nelson, 2000); physical abuse and neglect (Corcoran, 2000); emotional maltreatment (Schrader McMillan et al., 2008); sexual abuse (Corcoran and Pillai, 2008) and physical, emotional and sexual abuse and neglect (Skowron and Reineman, 2005).

Physical abuse and neglect. MacLeod and Nelson identified multicomponent programmes, intensive family support and parent training as effective (MacLeod and Nelson, 2000). High levels of participant involvement and strengths based approaches increase effectiveness. In families where there is a risk of escalating abuse, promising approaches include (i) behavioural interventions, including behavioural parent
training and (ii) multisystemic family therapy. Skowron and Reineman provided evidence that psychological treatments to prevent the escalation of abuse are more effective than no treatment or community case management (Skowron and Reineman, 2005). There is some evidence that length of treatment may reduce the risk of re-occurrence/escalation of abuse.

Emotional abuse and neglect. Schrader McMillan et al. focused on interventions to prevent the escalation of emotional abuse and emotional neglect where this does not co-occur with other forms of maltreatment (Schrader McMillan et al., 2008). Although there are very few studies in this area, there is emerging evidence from qualitative studies of the effectiveness of interaction guidance and of parent–infant psychotherapy (in particular mentalization-based approaches) in enhancing caregiver sensitivity in parents with more severe psychopathology. Study quality is an issue with research on psychotherapy. There is some evidence that group-based behavioural parent training (Triple P), with additional individual support and with anger management components can help parents regulate anger and achieve more realistic expectations of children.

Child sexual abuse. Corcoran and Pillai assessed parent or parent and child-focused interventions aimed at preventing deterioration of child mental health and/or recurrence of abuse (Corcoran and Pillai, 2008). There is some evidence that CBT offers greater benefits than non-directive treatments to preschool survivors of sexual abuse and their parents in spite of research showing more limited effectiveness of CBT with preschoolers in other contexts. There is also evidence that CBT for non-abusing parents and children is effective with school-aged children. Parent-focused interventions (e.g. instructional videotapes based on social learning theory) at the time of a sexual abuse disclosure also appear to benefit children’s psychosocial functioning. Parental support is critical for recovery and interventions need to include provision of adjunctive (e.g. social) supports for parents. No review level evidence was identified that involved parenting interventions with parents of adolescent survivors of sexual abuse.

Parental drug and alcohol abuse

Three reviews (Doggett et al., 2005; Suchman, 2006; Schrader McMillan et al., 2008) examined the limited evidence of studies of psychosocial interventions with a parenting component for drug and alcohol misusing parents. There is no evidence that generic programmes that are successful with mainstream populations, or even populations at demographically high risk alone, are effective with drug-addicted adults. Home visiting is associated with higher levels of referral of children where there is high risk of child abuse due to increased opportunity for observation of parents and children.

There is emerging evidence, based on a small number of studies that the multi-component Parents Under Pressure (PuP) can affect positive change in the families of parents on methadone treatment (Schrader McMillan et al., 2008). PuP combines home-based parent and relationship education with initiatives to integrate families into social networks and access adjunctive supports.

Parents with severe mental health problems

One systematic review of parenting interventions for parents with conditions such as schizophrenia, mood disorders or puerperal psychosis has been undertaken (Craig, 2004) but this identified no studies that met its inclusion criteria. There is an urgent need for research to evaluate the effectiveness of parenting programmes with parents experiencing severe mental health problems.

DISCUSSION

Methods

The systematic review of reviews methodology is good for describing the evidence base of diverse approaches and programmes such as we have included here. It can provide a robust overview giving readers insight into the range of approaches that can work. It can also show which areas have been subject to a great deal of research (e.g. formal group-based parenting programmes and home visiting programmes) and which have received less attention (e.g. low cost general population approaches). Synthesizing this literature was not straightforward. Although we have reported our results in four separate sections, there were no neat divisions in this
literature. Other reviewers might have presented the results in different categories. The exclusion of primary studies that have not been covered in reviews, which will include the most recent studies, is a drawback. Another drawback is exclusion of non-systematic reviews [e.g. (Olds et al., 2007)]. While these can be biased in the choice of studies they include, they often provide careful description of programmes and thoughtful reflection on what works and what does not work. Such contributions may be lacking in systematic reviews undertaken by review rather than subject experts.

Although we excluded reviews of parenting programmes designed to treat mental illnesses such as conduct disorder [e.g. (Dretzke et al., 2005)] it was clear that some primary studies in the reviews included families with clinical level problems alongside families with subclinical behaviour problems and those at demographic high risk. In both cases it could be argued, the programmes were offering prevention of escalation of the behavioural problem and the adult mental health sequelae of behaviour problems. Differentiating between ‘prevention’ and ‘treatment’ in this area of intervention is therefore more complex than in some other fields.

We have included reviews of the treatment as well as prevention of ‘child abuse’ on the grounds that treatment of abusive parenting can prevent the development of mental illness concomitant on abuse and could have beneficial effects on children other than the victim of abuse. In this regard ‘child abuse’ was regarded as an extreme form of suboptimal parenting, rather than a medical condition.

We have excluded reviews that did not report mental health or parenting outcomes and thus the report does not cover trials of nutrition or physical activity promotion in a family setting. These are both distal risk factors for mental health problems in children and could have a place in an expanded review.

We excluded reviews of parenting programmes based in schools. Such programmes are usually combined with school-based mental health promotion programmes which are covered in a companion review. We also exclude one review of interventions to prevent child sexual abuse (MacMillan et al., 1994) since this covered school-based programmes which aimed to train children to recognize stranger danger rather than targeting parents and parenting.

Findings

The first three sections all yielded a significant evidence base of programmes which have been shown to be effective in improving parenting and children’s mental health. Several of these programmes have been tested in multiple robust trials and been recommended in multiple systematic reviews. These programmes range from very low cost universal programmes to high cost intensive support for high-risk families. The group of families for which the evidence base is most sparse is those at the greatest risk of very damaging parenting, including families where parents have a mental illness, families were parents abuse drugs and alcohol and families where serious abuse and neglect has already occurred. This gap in the literature almost certainly reflects the complexity of working with a group of families who are usually very hard to reach and equally hard to help. There is an indication in these reviews that such families can be helped but also that this is an area urgently in need of further investment, both in terms of programme development and research and evaluation.

Most of the studies covered in the reviews have been undertaken in the USA on programmes developed in the USA. A small number have been developed in Australia and Europe. However, it would seem from the studies included that programmes can travel successfully from one continent to another. Cultural differences are important for families but if offered sensitively standard programmes still seem to be helpful in minority ethnic groups.

This review found evidence of effectiveness for programmes suitable for families with infants and those for older children and show that if parenting can be influenced for the better, outcomes for children can be changed. Programme approaches differ according to developmental needs, those for families with older children often focusing on behaviour, but all have in common the sensitization of parents to children’s needs. It also found evidence for both relatively low cost programmes suitable for the general population as well as programmes for higher risk groups. There is a wide-ranging debate about whether preventative services should be offered universally or targeted. There are several arguments in favour of providing universal programmes. First, they reduce the potential for stigma attached to programmes for parents who are deemed to be failing. Second,
universal programmes may be better able to address problems before they reach clinical levels, and are therefore more genuinely preventive than programmes that become available only after problems have developed. Third, the ‘population paradox’ refers to a situation in which a relatively large number of lower risk individuals carry the main burden of risk of disease in the population as a whole, such that while people living in a specific area may be at high risk, the majority of high-risk people are actually spread out across a range of areas. A combination of both universal and targeted approaches to support for parenting is likely to be most effective because improvements in ‘normal’ parenting are necessary to promote mental well-being and targeted approaches are necessary to work on more intractable problems.

Elements of success

Recruitment and retention of parents in parenting programmes is an issue many reviewers commented on and both factors were more common in the higher risk families. The success of most interventions with parents, or with parents and children, is inevitably influenced by contextual factors—poverty, poor housing, the absence of safe space for children’s play and recreation, unemployment and a range of other sources of community and environmental stress. These are rarely discussed in controlled trials. Programme providers clearly need to give careful consideration to how participants are to be recruited and to the potential barriers to participation. The fact that parenting programmes were found to improve parents psychosocial health could probably be made more of in advertising these programmes.

One component of effectiveness which is discussed by many reviewers is the skills of the facilitators and all agree that these are critical. Non-judgemental, strengths based approaches are essential, but these are not skills in which health professionals are routinely trained or skilled. The development of a skilled workforce is likely to be a prerequisite for successful mental health promotion through parenting approaches. It is one of the disadvantages of the sort of research evidence on which this report is based that few of the studies have measured facilitators’ skills.

In terms of the content of programmes evidence, primarily from group-based formal parenting programmes, suggests that programmes with a manual or curriculum, covering emotional communication and relationship skills, and based on experiential learning in which parents’ practices new skills like the use of ‘time out’ were more effective. Overall these interventions need to adopt key principles, these are: positive framework, realistic expectations and an ecological framework.

Two areas where there is some element of disagreement in the literature relate to length of programmes and the qualifications of the practitioners, both of these were more relevant to home visiting programmes. Most studies suggest the need for frequent visits over an extended period of time especially with high-risk families where the establishment of trust in the practitioner is important. One review suggested that a small number of sessions were more effective than many. The latter evidence related to specific behaviourally focused interventions like video interaction guidance and some of the studies may have been on lower risk families. Another area of discrepancy relates to the extent of training needed to provide such programmes. Some programmes have been provided by volunteers and some with the help of intensively trained, highly skilled professionals. In general it seems that volunteer programmes can be useful with lower risk families and possibly for outreach with higher risk groups, but that achieving change in parenting with high-risk groups requires skilled facilitator. Research on the formal group-based parenting programmes, however, is much clearer about both the ‘dose’ of intervention needed—2 h a week for between 8 and 12 weeks—and the need for training of practitioners.

Gaps in the literature

We identified several gaps in the literature. There was only one review with a number of studies that involved older children (to age 12 years) and that focused on parents of adolescents. Most of the programmes included in the latter were offered through schools. It may be that reviews of parenting programmes for teenagers focus on outcomes which were excluded from this review; for example reviews exist of the impact of parenting programmes on teenagers’ smoking, alcohol and drug misuse (Petrie et al., 2007). Another gap in the literature relates to programmes to support fathering. We only identified one review and this focused
on fathers of children to age 5. These studies show that it is possible to provide programmes which improve fathering, but by no means all interventions were successful and many included studies were of weak design. More research in this area is urgently needed. Perhaps the most important gap as we identified above relates to the highest risk families where parents suffer mental health problems: there is an urgent worldwide need for the development and evaluation of effective programmes for this very high-risk group.

Summary of findings
Overall the review findings allow the recommendation of the following programmes:

Low cost universal
- Skin-to-skin contact at birth.
- Kangaroo care.
- Abdominal massage in pregnancy.
- Media-based parenting programmes.

Slightly higher cost universal
- Developmental guidance.
- Anticipatory guidance.
- Infant massage.

Targeted programmes for high-risk groups
- Psychosocial interventions offering emotional and practical support for the prevention of post-natal depression.
- Treatment for post-natal depression using cognitive behavioural approaches, interpersonal therapy or non-directive counselling.
- Long-term multicomponent home visiting programmes starting antenatally offering both support for parenting and support for parents particularly for teenage parents.
- Short-sensitivity focused interventions including parent–infant interaction guidance training for high-risk infants.
- Manualized group based and one-to-one parenting programmes addressing behaviour management and parent–child relationships.

Promising programmes which need more research
- In all families—antenatal education focusing on transition to parenthood and emotional and attachment issues and programmes to support parenting of fathers.
- In families experiencing attachment difficulties and where there is a risk of abuse: parent– infant psychotherapy and infant led psychotherapy.
- In families in which physical abuse has occurred—intensive, multicomponent, multi-systemic family support approaches and cognitive behavioural-based parenting programmes.
- In families in which emotional abuse has occurred—parent– infant psychotherapy; and where anger management is also an issue—group-based behavioural parent training with additional anger management components.
- In families where sexual abuse has occurred—CBT for the non-abusing parents; abused children can also benefit.
- In families where parents abuse drugs: multicomponent programmes targeting affect regulation, parental mood and views of self as a parent, drug use and parenting skills delivered on a one to one basis.

We also identified ineffective interventions
- Psychological debriefing after birth.
- Universal approaches to prevention of post-natal depression.

CONCLUSION
A robust international evidence base exists of programmes which have been demonstrated to improve parenting, both in the general population and in high-risk groups. Policies and programmes to support parenting offer much scope for improving mental health. Effective provision requires a skilled workforce and detail with regard to approaches that have been found to work. More research is needed to develop and identify interventions for some of the highest risk groups.

REFERENCES
APPENDIX: INCLUDED REVIEWS


