

0-4 years

Missed opportunities: children and young people's mental health

Good mental health, wellbeing and cognitive development in under five year olds is shaped very early on right at the first spark of life in the womb and is determined by a complex interplay between genetic make-up and exposure to risks and protective factors in the environment. Mental health terminology, language and labels are used cautiously to make sense of child responses under the age of three since there is much less evidence for persistence of problems. Instead, before the age of three, foetal, infant and child mental health and wellbeing are framed in terms of creating a health-enhancing environment (from pregnancy to early years) promoting optimal neurological, emotional, behavioural and social development.

Conception to birth

Neuroscientific research into foetal and infant development is at an early stage but is adding significantly to our understanding of how good mental

health is promoted and compromised (Zeanah, 2012). Foetal and infant development and wellbeing are shaped by multiple contexts ranging from individual genetics, temperament and neurobiology as well as parents, families, culture and class. Each of these contexts transact with each other in complex ways over time. From the moment of conception, a foetus is exposed to a complex psychological and biological context influencing all aspects of their development including cognitive development and mental health architecture. There is increasing evidence of associations between key environmental risks during pregnancy and poorer child mental health later on.

It is becoming clear, for example, that early negative experiences can have significant negative effects on children that persist into childhood and way beyond. Studies note critical periods when a foetus or an infant needs well-regulated health-promoting environments and stimuli to promote optimal neural

functioning and to prevent altered brain circuitry and architecture (Shonkoff & Garner, 2012; Shonkoff, 2012). Some neural changes, after exposure to non-ideal environmental influences, appear permanent; with others some recovery is noted later on (Zeanah, 2012). Research is still very much at an early stage in understanding the brain's potential for recovery following early exposure to risk.

The mother's womb is the first significant environment for a foetus and studies highlight a number of environmental factors shaping optimal foetal wellbeing. An increasing number of studies demonstrate how a mother's experience of significant stress or poor mental health (ranging from mild to moderate conditions such as anxiety to severe mental illnesses) during pregnancy can impact negatively on foetal development (Antonelli, 2014). In the case of severe anxiety, studies suggest that prolonged over exposure to stress hormones in the womb raise foetal heartbeat, over stimulate stress response areas in the brain and alter brain architecture potentially leading to later difficulties regulating emotions and coping with adversity (Field, *et al.*, 2004; Monk, *et al.*, 2003). Resulting neural changes can suppress immune responses, affect learning and memory and can act to turn certain genes 'on' or 'off' at particular locations in the brain (Zeanah, 2012) with long lasting implications throughout life.

Exposure to some substances in the womb have also been noted to have a toxic effect on children's brain development and later mental health. For example, exposure to tobacco in the womb has been linked to greater risk of serious behavioural difficulties later on (and this is even after controlling for other high risk factors affecting poor child mental health such as socio-economic status, parenting quality etc). Studies also indicate that exposure to alcohol and lead at critical developmental times can alter neurological development, potentially reducing cognitive ability and undermining later mental health (Zeanah, 2012).

Birth to eighteen months

After birth, the quality, sensitivity and responsiveness of care-giving becomes central to healthy neural, emotional and behavioural development in many ways.

At birth, infants have highly reactive and volatile systems for reacting to stress. Newborns routinely experience moderate and short-lived stress from both internal (hunger, tiredness) and external sources (e.g. loud noises, pain). A sensitive mother/care-giver acts as an important buffer against early stress, slowly helping moderate the infant's exposure to stress hormones. If all goes well, by two months, as a result of this buffering, the infant's stress system begins to stabilise and by six months infants are slowly learning how to self-regulate in the face of stresses, which is a critical skill (Zeanah, 2012). Without an effective care-giving buffer, infants can once again become over exposed to prolonged and potentially damaging stress hormones which can affect later ability to self-soothe in the face of adversity. These inability to self-soothe and regulate emotions lie at the root of many later mental health problems.

The quality and sensitivity of moment by moment communication between care-givers and infants is also fundamental to good child mental health. This attunement and 'serve and return' communication involves acknowledging and reflecting back infant responses and has been described as being a critical stimulus for healthy neurodevelopment – almost 'jump starting' brain circuitry (Tronick & Beeghly, 2011).

Attachments between child and care-givers also first form in infancy from the child's need for nurturing, comfort and protection (Bowlby, 1973; Bowlby, 1980). Healthy attachments help to buffer infants against adversity and contribute to an internal working model promoting further the ability to regulate emotion and self-soothe over time. More recent research has highlighted additional core elements of healthy attachment during the first year of life. These include parental interaction being neither overly intrusive nor too passive, but rather in the

middle range (Early Intervention Foundation, 2015) and the ability of parents/care-givers to see their child as an individual with a mind, beliefs, intentions and feelings rather than just a collection of needs (e.g. for food, to be changed, to sleep) (Meins, *et al.*, 2001). As children mature, they are likely to reproduce relationships which match the level of security they experienced as part of their original attachment with their carer (Zeanah, 2012).

When children are inadequately buffered from early environmental adversity, are inadequately stimulated and when their care-giver becomes a source of fear, this can have very long term and damaging effects on a child's mental health extending into adult years.

Twelve months to four years

From the age of twelve months, children continue to experience stepping stones of rapid cognitive, behavioural and emotional development shaped by their environment and mediated through their relationship with their care-giver. Toddlers require ongoing sensitive care-giving for optimal development which provides a safe and secure base from which to start exploring the world and becoming more independent. Having care-givers who encourage and take pleasure in their exploration of the world around them, who engage in sensitive conversational reflections and 'turn taking' further cements positive attachments (Markus, *et al.*, 2000) with play and storytelling further contributing to healthy cognitive development (Zeanah, 2012).

For children to thrive, it is vital that they are not exposed to maltreatment and abuse. In terms of parenting style, the absence of coercive or harsh parenting and the presence of positive proactive parenting (e.g. involving praise, encouragement and warmth) are associated with:

- higher child self-esteem;
- higher social and academic competences in children;
- reduced disruptive behaviour and substance misuse later on.

(Rutter, Giller, & Hagell, 1998) (Gardner, *et al.*, 1999; Denham, *et al.*, 2000; Hutchings, *et al.*, 2007a)

Prevalence of mental health difficulties

Almost all infants and toddlers pass through many transient 'phases' which subsequently resolve as part of normal child development (Olds, *et al.*, 1997). For example, most children (70%) take toys away from other children, almost half will push other children to get what they want and a fifth engage in activities such as biting, kicking and fighting (Gardner & Shaw, 2008). Many infants will also experience social anxiety when faced with new situations but generally negotiate fears encouraged by sensitive and positive care-giving and with exposure over time (Gardner & Shaw, 2008).

However, some children get stuck in negative patterns of relating to the world around them which can be distressing for both child and parent/carer (potentially undermining the quality of this key attachment). This can compromise on-going development (Eggar & Angold, 2006). At this age, such patterns can include excessive crying, persistent sleeping difficulties or eating problems, severe and repetitive tantrums or obsessive behaviours, very persistent separation anxiety or social isolation and ongoing challenging, hyperactive, disruptive or aggressive behaviour.

Between the ages of 2-5 years, poor child development, mental health or neurodevelopmental difficulties (e.g. attention deficit hyperactivity disorder, autism) tend to be identified through tracking Early Years developmental milestones and also based on the persistence of severe difficulties.

The Early Years Foundation Stage (EYFS) sets standards for learning, development and care of children in England from birth to five years old. Data from these early checks have provided a useful overview of the emotional, social and behavioural health of children in England.

Figures from 2014 Early Year Foundation Stage (EYFS) Profiles collated by health visitors and early years workers indicated that most five year olds show healthy development in terms of social and emotional skills. However a minority do less well than others, and boys tend to lag behind at these earlier stages of child development:

- One in four children (17% of girls and 29% of boys) did not reach the expected level in language and communication skills.
- 13% of girls and a quarter of boys failed to reach the expected level in personal, social and emotional development across the country.

(Department for Education, 2014a).

There is currently little good quality data on the number of 3-4 year olds in the UK who meet the criteria for mental health diagnosis. Neither do we know much about trends in infant and toddler mental health over time. Previous national child and adolescent mental health prevalence surveys have not collected data on under five year olds although children of three years plus are expected to be included in a new UK prevalence survey due to start imminently and reporting back in 2018. Figure 1 summarises best available knowledge on the numbers meeting the criteria for diagnosis in this age group.

At this early toddler stage gender differences were not as marked as for children over the age of five years, with girls as likely to get stuck in patterns of problematic behaviour as boys (Gardner & Shaw, 2008). Some studies note particularly high levels of impairment to day to day lives at this age resulting from diagnosable difficulties. Many children at this age also meet the criteria for more than one condition (around a quarter overall but rising to half by the age of five years). Most significant behavioural problems at this age tend to resolve as children

move through later developmental stages (Morrison Gutman, *et al.*, 2015). However, where disruptive behaviour was severe and persistent at age three, studies note that around half of children continued to experience problems during school years (Campbell, *et al.*, 2000; Hill, 2002).

Major risk factors

Poor child and adolescent mental health results from a complex interplay between internal factors such as genetics and neurobiology and external influences including parents, families, communities, culture, neighbourhood and economic position.

Research on the biological effect of adversity illustrates how the body's physiological equilibrium can break down under cumulative conditions of chronic stress (called 'allostatic load') (Danese & McKewen, 2012). So the longer a child is exposed to risk, the greater the chance their wellbeing (and other aspects of their health) will be undermined. There is also growing evidence that the timing of exposure to risk may influence later mental health outcomes with some periods of foetal development being more critical than others. Finally, there is strong and varied evidence linking multiplying or 'cascading' adverse experiences in infancy and childhood with a whole range of later physical and mental health problems (Kessler, *et al.*, 2010). If parents face too many stressors (and are unable adequately to buffer infants from adversity, unstable housing,

Figure 1: Prevalence of diagnosable psychiatric conditions in preschoolers based on a review of prevalence studies (Egger & Angold, 2006)

Type of condition	Percentage range meeting diagnosable rates (%)
Attention deficit hyperactivity disorder	2-6
Oppositional defiance disorder (A form of conduct disorder more commonly found among younger children)	4-17
Any behavioural disorder	9
Any anxiety disorder	9
Any emotional disorder	11-15
Any diagnosable mental health condition	14-26

conflict-ridden relationships, family structure, location in a high crime area) infants can be overexposed to stress and stress reactivity systems in the brain can be over stimulated by fight or flight hormones. This in turn has a 'toxic' effect, weakening and recalibrating children's competency in managing adversity and compromising wellbeing. Children facing multiple stepping stones of risk over their lifetime are those with the greatest risk of poor mental health (Rutter, 1979; Farrington, 1997b; Murray, *et al.*, 2010; Farrington, 1997b).

Exposure to environmental risk does not mean that poor mental health is inevitable. Indeed, children can take very different developmental trajectories even when exposed to similar degrees of adversity and risk. Some children demonstrate greater 'self-righting' tendencies in the face of adversity than others (Hanson & Gottesman, 2012). We are still in the process of fully understanding what influences these different pathways taken by children facing similar degrees of adversity and there is a need for more research in this area. However, exposure to risk does increase the likelihood of children experiencing poorer mental health and should prompt those working with affected families both to mobilise child mental health-promoting responses and to be vigilant for early signs of mental health deterioration.

Maternal mental health difficulties

There are particularly strong associations between poor maternal mental health during the perinatal period and the later development of child mental health problems.

Perinatal mental health problems (which include common mental health conditions such as high levels of anxiety and depressive illnesses as well as more severe mental illnesses such as post-traumatic stress disorder (PTSD) or psychosis) affect between 10% and 20% of women at some point during pregnancy and for the first year after birth. Around 13% to 15% of women experience common mental health problems such as depression and anxiety (O'Hara & Swain, 1996; Heron *et al.*, 2004). Infant development appears particularly sensitive to exposure to poor maternal

mental health and high levels of stress during pregnancy and for up to 18 months after birth (Glover, 2014).

Cycles of poor mental health and flat mood can also potentially undermine maternal sensitivity to and attachment with infants. Fathers/partners are also at greater risk of deteriorating mental illness during the perinatal period decreasing access to compensatory protective relationships (National Institute Clinical Evidence, 2014).

At the present time, identification of pregnant women at risk of or living with poor mental health is inconsistent (Maternal Mental Health Alliance, 2014; Khan, 2015a) with only half of those with a diagnosable difficulty being identified, only half of those identified getting any help, and a minority of these getting effective help (Bauer, *et al.*, 2014). Pregnancy represents a time of considerable change and adjustment and many women are unaware that what they are feeling at this time may not be 'normal'. They can feel confused by their deteriorating wellbeing or may be unwilling to disclose concerns due to high feelings of shame at being judged as 'not coping' (Khan, 2015a). For this reason, it is imperative that there is an equal focus during these important years on maternal, infant and family mental health and emotional wellbeing as well as the physical dimensions of pregnancy and birth. Routine screening is identified as helpful but not if delivered in a mechanical or insensitive manner.

When women proactively approach professionals for help, they describe unreliable, inconsistent and sometimes stigmatising and unsympathetic responses with many practitioners either down-playing maternal concerns or unaware of the added significance of anxiety and mental illness at this important time and its potential to disrupt an infant's healthy neurological development (Khan, 2015a). Furthermore, adult mental health services have often been criticised for insufficient routine consideration of service users as parents whose children's needs might also be affected by their illness without enhanced holistic family support (Ofsted, 2013).

Finally, there is inconsistent availability nationwide of timely psychological therapies for mothers with common conditions, specialist perinatal mental health services (for those with more serious illnesses) and mother and baby units for those in crisis (Maternal Mental Health Alliance, 2014; Khan, 2015a).

Parental substance misuse

Fixation with and reliance on drugs and alcohol also potentially interferes with and undermines a parent or care-giver's sensitivity to an infant's rhythms and needs, compromising the quality of the environment around the child and reducing parental ability to stimulate and promote healthy neurological development and mental health. Parents may also be using substances to manage co-existing mental health difficulties both of which can also impinge on parental sensitivity. They may be using substances to manage their own unresolved attachment problems or mental health difficulties, thereby further amplifying environmental risks affecting child development and mental health (Ofsted, 2013).

Maltreatment, abuse, trauma and neglect

Child maltreatment, abuse (physical, sexual, psychological) and neglect represent a major environmental risk for child mental health and normal biological and psychological development (Cicchetti, 2013). They undermine the quality of parent/child attachment and can also result in parents/care-givers being a direct source of fear (and sometimes terror) for infants, rather than the required buffer against adversity and stress or a source of comfort and safe haven (Shonkoff, *et al.*, 2009). This confusing and distressing situation, where a child both craves and fears contact with their care-giver, is often linked to the development of insecure or disorganised attachment patterns between infant and care-giver (Early Intervention Foundation, 2015). Without additional support, such attachment styles can embed and have long lasting effects linked to later poor mental health and particularly adult personality disorders. Disorganised attachment is often associated with compromised neurodevelopment, an inability to self-regulate/

self-soothe, hyper reactivity to stress (setting the stress response system on a "short fuse") and later poor mental health (Zeanah, 2012). Harsh parenting has also been associated with poorer child mental health (Smith, 2004).

There is some evidence that the earlier a child is exposed to neglectful and abusive environments and the later they exit these circumstances, the worse their mental health and cognitive outcomes. Longitudinal studies of children exposed to extreme neglect and deprivation in Romanian orphanages showed that they experienced much higher risk of poor mental health later on. Risks increased the earlier and longer they were exposed to these settings and in spite of later transfer to predominantly positive post-adoption care. On the other hand infants escaping risk very early on showed greater capacity for recovery and fewer later mental health and developmental problems (Kumsta, *et al.*, 2015). These findings suggest that early and prolonged exposure to maltreatment leads to lifelong persistent physiological alterations occurring in the brain; it also reinforces the importance of intervening early to reduce toxic environments and prevent later poor mental health (Kumsta, *et al.*, 2015).

Poverty

Poor mental health usually has multiple and complex interlinking causes and it is important not to oversimplify the drivers. However, prolonged family poverty and to a lesser extent neighbourhood poverty can play an important role in worsening child and youth mental health (Akee, *et al.*, 2010; Yoshikawa, *et al.*, 2012). The effect of poverty on poorer child and youth mental health is independent of other influential factors such as levels of parental education or ethnicity (Joseph Rowntree Foundation, 2015). It is not just absolute or average levels of poverty that have an important impact on child mental health and emotional wellbeing, but also relative poverty in a society; those societies that have the largest gaps between the richest 20% and poorest 20% tend to have worse child mental health outcomes (Wilkinson & Pickett, 2011; Yoshikawa, *et al.*, 2012). In a study in 2009, Wilkinson and Pickett also identified the UK, Portugal and Singapore

as examples of societies with larger gaps between rich and poor compared, for example, with Scandinavian countries (Wilkinson & Pickett, 2009).

Poverty is thought to affect infant mental health through a variety of mechanisms operating at different levels:

- Adults living in deep and persistent poverty are likely to experience and can expose their children to higher levels of stress as a result of general living conditions, reduced opportunities and survival struggles due to economic and environmental insecurity. Such exposure can compromise the neurobiological processes that guide later responses to stress in longstanding ways (Shonkoff & Garner, 2012).
- Poverty is associated with higher levels of poor adult mental health and this in turn can undermine parental energy to be sensitive and responsive carers and their ability to fulfil critical buffering roles which help children deal with stress and adversity.
- Parental poverty, low educational achievement and mental illness have also been associated with higher rates of child maltreatment which is also detrimental to children's mental health (Gilbert, *et al.*, 2009).
- Finally, impoverished families often live in neighbourhoods characterised by poorer day care and schools, higher levels of adversity, stress and violence with fewer opportunities for enrichment or to exit poverty.

The relationship between socio-economic deprivation and the development of serious childhood behavioural difficulties is complex. Parenting can be undermined by poverty and poverty may indeed drive other risk factors such as family conflict and poor maternal mental health (Simons, *et al.*, 1993; Conger, *et al.*, 2002). However, there is equal evidence that positive parenting has potential to act as a protective buffer against the negative effects of poverty (Kim-Cohen, *et al.*, 2004).

What works

Most effective interventions seeking to promote infant and child mental health during early years concentrate on strengthening crucial aspects of the parent/care-giver relationship which we know improve neurological, social, child development and mental health outcomes (e.g. parenting sensitivity, positive attachment and positive parenting techniques). They also seek to reduce health-compromising care-giving and environmental characteristics and stressors (e.g. maltreatment, parental emotional unavailability, harsh parenting, poverty, multiple risk factors).

Interventions seeking to encourage improvements in child mental health can attempt this in three different ways:

- Through promoting change across the whole population (a universal approach);
- Through seeking to reduce risks among populations who are known to have higher risks (targeted or selective approaches) including those relating to maternal mental health and to mitigating the effects of poverty;
- Through seeking to target infants and children at the very first point that they show signs of a diagnosable mental health condition (early intervention or indicated approaches).

Universal interventions

As a general rule of thumb, universal programmes (e.g. population-level preventative programmes such as newsletter awareness-raising campaigns about optimal parenting or making available parenting groups to everyone) have not produced as convincing results so far as targeted strategies (Early Intervention Foundation, 2015).

However, one universal programme shows promise in this respect. The 'Triple P' Positive Parenting approach is a stepped programme of parenting support (ranging from a media campaign reaching the whole population to specialist group work for those with higher chances of reduced parent sensitivity and

poorer attachment). This 5-stage programme was piloted across an entire state in the US (South Carolina), tracking and comparing outcomes for children in the state with a sample of children elsewhere not exposed to the programme (Prinz, *et al.*, 2009). At the conclusion of the trial, overall child outcomes were superior for those children and families exposed to this multi-level pilot programme. Child mental health and wellbeing outcomes were not tracked as part of this research. But there was evidence of sizeable reductions in an important area of risk associated with poorer child mental health – maltreatment (Prinz, *et al.*, 2009).

More recently, a similar multi-level whole population ‘Triple P’ parenting approach was tested closer to home in Ireland targeting three to seven year olds in Galway (Fives, *et al.*, 2014). This initiative tracked child and family mental health and wellbeing, noting lower levels of mental health difficulties (e.g. conduct problems, emotional problems, ADHD) and improved parental mental health after intervention compared with children and families in neighbouring ‘control’ counties. Improvements were also almost all sustained at twelve month follow up (Fives, *et al.*, 2014).

At the present time, such whole population programmes have not been tested sufficiently to determine whether results can be consistently replicated. Neither has the initiative yet been fully investigated to assess whether costs of whole population coverage, when compared with savings from improvements, make this a viable approach. These are, nevertheless, initiatives which show good promise and which should be further trialled and evaluated in the UK (comparing outcomes against a comparison group and investigating the economics of such coverage).

This type of universal prevention programme, open to all families, is often favoured because it is considered to reduce stigma for vulnerable parents and families (improving help seeking). However, in practice, making programmes available in this way has not always worked quite as planned. SureStart programmes, made available via Children’s Centres in the early

2000s, had an open door policy to all parents in local communities for parenting resources and support. While this open door approach led to good uptake of parenting support by low risk parents, engagement by high risk parents was limited. Overall evaluation results were mixed with some findings indicating that health and social inequalities had increased and outcomes and risks had deteriorated for some higher risk groups compared with comparison groups in areas without these services (Belsky, *et al.*, 2006; Eisenstadt, 2011). Learning from SureStart highlighted the importance of investing in outreach work to develop strong relationships with and engage under-served parents (Eisenstadt, 2011). Findings also led to Children’s Centres being much more targeted towards parents facing higher risk factors for poor child and family outcomes.

Finally, there are some relatively low cost digital whole-population level initiatives currently under evaluation (Early Intervention Foundation, 2015). These programmes should be further researched and monitored to investigate whether they result in sustained improvements to children’s mental health.

Interventions targeted at higher risk parents and infants

Research studies indicate more consistent improvements from interventions for children’s mental health which target parents with known risk factors compromising children’s healthy development (Early Intervention Foundation, 2015). However, although some programmes show promise, results can be somewhat mixed in terms of their ability to prevent later child mental health problems. Generally, more research is required to strengthen knowledge and the evidence base for what works as well as to understand protective factors which enable a child to thrive in the face of adversity.

Some promising interventions targeted at high risk families include:

Parent-Infant psychotherapy: targeted towards children with a history of attachment difficulties and trauma. It aims to support infant mental health through strengthening attachment and parental sensitivity. A recent review of the

evidence suggested that such interventions appear promising in their ability to improve infant attachment security in high risk families (Barlow, *et al.*, 2015). Longer term research tracking longevity of impact and knock-on effects on children's later mental health and wellbeing is required.

Infant massage: this low-cost intervention has no proven impact on infant wellbeing when targeted at all parents and infants but it shows some promise with higher risk parents (with more research advised to understand exact drivers underpinning observed changes). Two studies highlighted that infant massage showed positive impact on maternal depression but only one noted improvements in parent-infant interaction (Early Intervention Foundation, 2015).

Video feedback interventions supporting 'protective' parenting behaviours: brief video-feedback sessions with higher risk families demonstrate good success in producing improved child mental health outcomes for under 5 year olds. These programmes work through helping parents improve their interaction skills, which in turn promote child development. Parents become more skilled in interacting with their young child, experience fewer problems and gain more pleasure from their role as parent (Kersten-Alvarez, *et al.*, 2011).

Home visiting interventions supporting high risk parents: reviews of high quality evidence have suggested inconsistent results from studies tracking the impact of home visiting initiatives designed to support improved parenting with at-risk groups.

The best studied and most successful home visiting scheme has been Family Nurse Partnerships targeting teenage parents. Originally trialled and evaluated over many decades in the United States, they are now being rolled out and evaluated in the UK. These parents and their children have been identified as facing higher adversity across many different domains including higher socio-economic deprivation and poorer intergenerational outcomes (Asmussen, 2011). The intervention, built on a strong relationship with the home

visiting nurse, provides intensive outreach for two years after the birth of an infant and places a high premium on engagement skills. It has impressive levels of take-up despite being voluntary, and seeks to support parents to address multiple risk factors (including practical challenges) whilst also mobilising protective factors in the child and family's environment (e.g. promoting parent-infant sensitivity and attachments). Outcomes have been monitored in the US for this programme now for over 20 years with improvements noted not only in parental outcomes (reduced crime, reduced child abuse, reduced reliance on welfare and reduced neglect, etc) but also in child and adolescent outcomes (significantly improved high school graduations and reduced offending for daughters, improved earnings for young adult men). In order to work well, home visiting nurses receive high levels of training and ongoing supervision (Washington State Institute for Public Policy, 2015). Initial findings from a trial in the UK have so far been less positive (Robling, *et al.*, 2016); however, much of the broader positive impact and multi-sector savings in the US emerged for children and mothers over time, suggesting a priority need for longer term tracking of programme impact.

The programme is set down in a manual (although delivered reasonably flexibly) to ensure that practice remains faithful to the principles which have been observed to work. Such attention to high quality implementation has been shown by research to be vital for a number of programmes to achieve consistent results (Centre for Mental Health, 2012).

Other promising home visiting interventions are currently being piloted by the NSPCC in Glasgow, Sheffield and York and evaluated by the Anna Freud Centre. 'Minding the Baby' involves a two-year home visiting support for parents with mental health and substance misuse difficulties. It has developed a promising evidence base in the United States, improving mothers' sensitivity to their baby's feelings and needs (Olds, *et al.*, 2007). A robustly designed evaluation should provide useful data by 2018 on the programme's transferability into the UK.

Finally, NSPCC are also piloting another programme called ‘Parents under Pressure’ which has a promising evidence base in Australia of engaging with severe substance-misusing parents to improve parenting and infant mental health and outcomes (Dawe, *et al.*, 2003). This programme is also currently under evaluation in the UK.

Interventions which mitigate the effects of poverty

There are strong indications from a range of studies of the detrimental effect of children’s exposure to ongoing deprivation. Interventions designed to address poverty occur at a variety of levels and include broader government led welfare reform and anti-poverty activity (outside the scope of this report). Research does, however, point to some child development interventions (largely trialled and tracked over time in the US) which have resulted in notable improvements to children’s outcomes.

The HighScope Perry early childhood education programme was a preschool education programme targeting three to four year olds with African-American single mothers living in poverty. The study followed children up and compared their outcomes with a control group over two decades. The programme aimed to develop children’s participatory learning through encouraging them to plan an activity for the day, execute their plan, review progress and then talk through what they had learnt from the activity and process with a supportive preschool practitioner. The programme was supplemented through weekly home visits by preschool staff to parents.

The 40 year follow-up revealed significant gains for those in the intervention group as well as cost savings. Girls involved in this project were 80% less likely to present with cognitive impairment in schools and nearly twice as likely to complete secondary school successfully (although rather surprisingly this did not translate into higher earnings). Boys were much less likely to be involved in crime and were more likely to earn significantly more as adults. Economists have studied this intervention in detail and noted economic returns to society more than ten times the original investment

cost (Heckman, *et al.*, 2010).

It was assumed that benefits from the intervention would be related to gains in IQ. However, although IQ increased initially, gains were not sustained and did not appear central to the success of these children. Rather, improvements appeared more linked to the development of softer skills (the cluster of personality traits such as social graces, facility with language, planning and problem solving skills, personal habits, friendliness, and optimism – commonly known as Emotional Intelligence) that are present in people to varying degrees. Not all attempts to replicate gains from this programme have been successful. Learning from later implementation attempts have suggested that, like Family Nurse Partnerships, to have the greatest impact, such programmes need to be targeted towards those in highly adverse environments rather than being universally on offer to all parents (Heckman, *et al.*, 2010).

Some parenting interventions have also been noted to protect some children despite their exposure to poverty (Kim-Cohen, *et al.*, 2004).

Supporting effective treatment of maternal mental illness

Children of mothers who have experienced poor perinatal mental health have a higher likelihood themselves of developing poor mental health. A simple way of reducing one major risk factor impacting on foetal and infant mental health and wellbeing would be through improved identification and swift support for maternal mental illness. At the present time only around half of mothers with perinatal mental illness get the help they need and very few get reliable help capable of making a difference (Bauer, *et al.*, 2014).

It is essential that poor mental health in mothers and fathers/partners during the perinatal years is monitored with problems identified swiftly through routine screening by sensitive and compassionate universal services (e.g. midwives, health visitors and GPs). Routine health checks during pregnancy and for the year after birth should ensure equal focus on mental and physical health (Khan, 2015a).

There is good evidence of a range of NICE-recommended interventions which have the best chance of improving maternal mental health (National Institute Clinical Evidence, 2014). These should be engaging and easily accessible for families. In the case of mild to moderate mental illness, this will largely involve fast track access to recommended psychological therapies; for those with more severe mental illnesses it is likely to involve access to carefully monitored use of medication supported by specialist perinatal mental health services with an expert understanding of both child, maternal and family needs at this important time.

Mothers in extreme mental health crises should have access to mother and baby units where recovery can be supported in a psychologically informed environment designed to minimise stress, with support delivered by specialists in mother, baby and family mental health and in attachment for mother and infant.

Finally all those in routine contact with mothers experiencing mental illness should sensitively explore any disruptions in the quality of communication and attachment between mother and infant, making available compensatory support focusing on strengthening the mother-infant relationship where this is needed (National Institute Clinical Evidence, 2014). Effective intervention has the potential to make a big difference and has been shown to save considerable costs over time from reductions in later poor child mental health (Bauer, *et al.*, 2014).

Mothers experiencing perinatal mental health problems have raised concerns about the stigma they feel at 'not being seen to cope' when disclosing to some health professionals. They were concerned about the lack of swift access to psychological help as well as a

lack of attention paid to the infant/maternal relationship and any disturbance that might have occurred following their mental health crisis. Finally, studies have highlighted a lack of reliability and consistency in provision, and in responses from professional to professional and from area to area, to poor perinatal mental health (Bauer, *et al.*, 2014; Khan, 2015a).

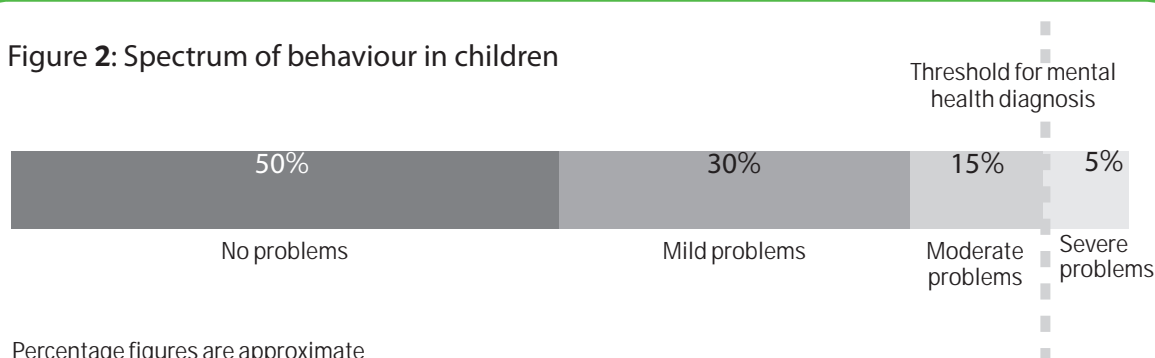
Investment in more consistent and evidence based care for mothers developing poor mental health, improved fast tracking to good quality help, and increased access to interventions to support infant-mother attachment and the emotional wellbeing of infants is an important first step in enhancing child mental health and preventing later mental health problems. The absence of attention to the mother-child relationship when treating poor mental health in women is a striking example of the gap between science and practice, given extensive evidence of the negative impact of diminished maternal responsiveness on the development of young children (Phillips & Shonkoff, 2000).

Early intervention programmes for severe behavioural problems

Children's behaviour spans a spectrum and every child at some point will present with some behavioural problems.

Behaviour is a significant communication for children and young people and can often be the primary way in which they communicate distress, stress and developmental frustration. Children who develop severe and persistent behavioural problems are at the most extreme end of the behavioural spectrum and will meet the criteria for the most common childhood mental health diagnosis – conduct disorder. Figure 2 shows the proportion of children at each part of the spectrum.

Figure 2: Spectrum of behaviour in children



Brown, Khan and Parsonage (2012)

When children get stuck in patterns of challenging behaviour, it is important to take early effective action to improve their mental health and reduce the chances of them accumulating other risks because of their behaviour (a deteriorating relationship with carers, teachers and friends, school failure).

Interventions targeting children with the first signs of diagnosable mental health needs are currently more proven than programmes targeting families or children on the basis of suspected risk factors (Centre for Mental Health, 2012).

Severe and persistent behavioural problems experienced by children under the age of ten have been identified in longitudinal studies (those following and tracking children's outcomes into adult years) as a marker for a range of diminished life chances including reduced life expectancy, reduced educational attainment, increased risk of either victimising others or being victimised, and higher risk of almost every mental illness (Fergusson, *et al.*, 2005; Moffitt, 2006; Moffitt & Caspi, 2002). Yet during preschool years, only around 5% of children with symptoms indicative of a diagnosable condition get any help (Kataoka, *et al.*, 2002). One in six new parents approach a medical professional for advice during early months and years, mainly about excessive crying. Most do not get practical help (over and above a diagnosis of the infant experiencing colic) to help families manage prolonged infant distress and wellbeing (Kaley, *et al.*, 2011).

There is consistent high quality evidence for the effectiveness of well implemented group programmes (such as Incredible Years and Triple P level 4 and 5) in promoting positive parenting techniques and in improving children's behavioural problems between the ages of three and 11 (Barlow, *et al.*, 2002; Centre for Mental Health, 2009; Centre for Mental Health, 2012; NICE, 2013; Parsonage, *et al.*, 2014). Improvements appear greatest for children with more severe needs (NICE, 2010). These positive parenting programmes involve praise, encouragement and affection and minimise negative communications or harsh responses. They can also reduce

parental stress and improve parental mental health (Barlow, *et al.*, 2009; Stewart Brown, 2010; Lindsay, *et al.*, 2011). Finally, there are indications that programmes can prevent the build-up of cumulative risks over time. For example, reducing child behavioural problems can improve a parent's relationship with and warmth towards a child and can improve a toddler's ability to form better relationships with day care staff and with friends in nursery. They also benefit siblings (Barlow, *et al.*, 2010).

Parents who access Positive Parenting programmes generally speak very positively of their experiences and about the impact it has had on their children – although some didn't know what to expect before they attended. Engagement is encouraged through ensuring that there are practical incentives supporting attendance (e.g. crèches, transport) backed up by good outreaching relationships with facilitators before and during the programme (Centre for Mental Health, 2012).

Parents, preschool workers and reception teachers can track children's wellbeing and whether it has moved into unhealthy ranges from the age of three years through completion of the Strengths and Difficulties Questionnaire (Goodman, *et al.*, 2000). It has separate subscales for behavioural and emotional wellbeing. In Scotland this tool has been incorporated routinely into early years and nursery care, with well supported encouragement and links for parents from day care settings to evidence based parenting programmes, helping them strengthen protective factors around their child (NHS Education for Scotland, 2014; Renz, 2015). Outcomes are being tracked by NHS Education for Scotland.

Investment in these interventions is considered good value, producing savings of £3 for every pound invested (Parsonage, *et al.*, 2014).

Although programmes have been consistently effective in improving children's mental health, there are insufficient studies tracking outcomes over the longer term allowing us to evaluate how long improvements last for children.

Seeking help

Studies indicate a range of barriers which deter parents from seeking early help between the ages of 0-5 years. Although mothers go through significant physical changes during pregnancy, they can often be unprepared for changes in their mental health despite the fact that pregnancy and parenthood is a significant life change and adjustment. Mothers can feel that they are failing when they are seen to be 'not coping' during perinatal months. They can feel guilty at feeling anything other than joy. Stigma associated with not coping has particularly been identified as an issue among African Caribbean mothers (Edge, 2009).

Mothers also fear that nothing can help them improve their mental health and there is inconsistent knowledge on the importance of maternal mental health for foetal and infant development and mental health. Not all mothers experience or are aware of disruptions to the relationship they develop with their child which is critical to stimulate neurodevelopment and buffer against toxic environmental risks. However, those that do note difficulties are unaware that there is help that can improve attachment and make a difference, and therefore do not seek help (Khan, 2014).

Finally, severe and persistent behavioural problems in children are the most common childhood mental health difficulty, yet they are at best overlooked by professionals and parents. At worst, children are seen as naughty (rather than in need or distress) preventing more positive and sensitive responses most likely to help children move back into healthy ranges. Parents describe being confused and embarrassed when their child's behaviour is persistently challenging, often feeling that either their child or they are failing. They are also sensitive to subjecting younger children to stigmatising labels. When they do seek help, they often face professionals who don't hear their worries or who use language and approaches which can often reinforce stigmatising feelings; many professionals are equally unaware of the significance of early starting behavioural problems, and families end up in help seeking 'dead ends' (Khan, 2014).

Key messages

- Good mental health and wellbeing in under five year olds is shaped very early on, right at the very first spark of life and is determined by a complex interplay between genetic make-up and exposure to risks and protective factors in the environment.
- During pregnancy, poor maternal mental health, over exposure to stress hormones and also to some substances (e.g. tobacco and alcohol) have a toxic effect on a child's brain development and later mental health.
- After birth, a healthy attachment to a care-giver helps to protect babies from adversity and stress: acting as a 'buffer' with the world outside and slowly helping infants to self-regulate in the face of frustration.
- For toddlers, positive proactive parenting (e.g. involving praise, encouragement and warmth) and the absence of harsh, rejecting and coercive parenting are associated with higher child self-esteem and social and academic competences.
- Infants and toddlers facing the highest risks for poor mental health include those whose mothers have untreated mental health problems, whose parents misuse substances, who are subject to maltreatment and neglect, and who live in prolonged poverty.
- There is a range of interventions that can help to protect mental health from pregnancy to age five. Most need to be targeted towards families who have the highest risks or children who are showing early signs of distress. They include group parenting programmes for children with behavioural problems (e.g. Triple P); home visiting programmes for parents facing high risks (such as Family Nurse Partnerships); and effective treatment for maternal mental ill health.

Missed opportunities

This is a chapter from the report **Missed opportunities: a review of recent evidence into children and young people's mental health** by Lorraine Khan. For the full report, or the reference list, please visit www.centreformentalhealth.org.uk/missed-opportunities

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