



# 0–2s: improving infant emotional development

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**Shift**

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# About this report

When starting work on a new topic area, Shift conducts a period of in-depth research which forms the foundations for the development of any new product or service. The research explores the issue of concern, its prevalence, groups most at risk, and behaviours that contribute to and protect against the issue.

This report is the conclusion of our initial research into Infant Mental Health, otherwise known as healthy infant emotional development, a topic area which now forms one of Shift's core areas of work. For this research we reviewed relevant academic, policy and grey literature, spoke to a number of academic and clinical experts in the field and conducted interviews with frontline workers including social workers, health visitors and staff at children's centres.

Based on this research, we have drawn together an overview of factors that contribute to healthy infant emotional development and possible approaches to promoting it. The findings in this report will inform our design process here at Shift but we also hope that it can be useful to others working on practical solutions in this area.

In parallel to the issue research stage, Shift also conducts in-depth user research to understand the issue from the perspective of those who experience it first hand. Within this project, this has involved interviewing and spending time with a broad spectrum of new and expecting parents, understanding their support needs, the pressures they experience, and their priorities and desires. The findings from the user research stage will be published later in the year.

# 01. Introduction

The first thousand days of life (from conception to the age of 2 years) is a time of rapid growth, physically, cognitively and emotionally. It is a pivotal period for a baby's emotional development during which they learn to experience, regulate and express emotions and form close and secure relationships.<sup>1</sup> Throughout this period of learning infants are laying down neural pathways and building the circuits that process emotional reactions and responses to people, events and surroundings. The emotional learning and pathways developed at this time form the foundations for the individual's emotional state in later life. In other words, what happens during this time shapes a person's emotional responses and behaviours throughout life, effectively underpinning their lifelong emotional and mental health.

Healthy emotional development is a protective factor against developing mental health problems later

in life. For example, those with healthy emotional development are less likely to experience depression, clinically significant anxiety, obsessive-compulsive disorder, and eating disorders.<sup>2</sup> Intervening to promote optimal emotional development at this very early age is, therefore, potentially an effective and cost-saving preventative approach to improving mental health in the population, and one which is gaining increasing support within the policy field.

The need for a preventative approach to health care has been identified by the NHS as a priority both for managing the nation's health and for managing the cost of treatment.<sup>3</sup> Taking a preventative approach is particularly pertinent in the mental health field at a time when one in four people in the UK will experience a mental health problem during their lifetime, at an estimated cost to the economy of around £70 billion every year, and budgets for this care are shrinking.<sup>4</sup>

<sup>1</sup> Zero to Three. (2001). *Definition of infant mental health*. Washington DC: Zero to Three Infant Mental Health Steering Committee. <sup>2</sup> Mikulincer, M., & Shaver, P. R. (2012). An attachment perspective on psychopathology. *World Psychiatry*, 11(1), 11–15. <sup>3</sup> NHS England (2014) *Five Year Forward View*. <sup>4</sup> OECD. (2014). *Mental Health and Work: United Kingdom*. Paris: OECD Publishing.

# 02.

# The promotion of parent-child attachment

Whether a baby reaches healthy levels of physical, cognitive and emotional development during their first two years is largely shaped by their interaction with the caregivers that take most responsibility for them, usually their parents. The importance of the relationship between the caregiver and baby on the baby's development is well articulated in the following quote from the Social Exclusion Task Force:

**"If a child is not talked to she will not develop speech and language capacity, if she is not given opportunities to use her developing motor systems, she will not develop motor skills, and, most devastating, if she is not loved, she will struggle to love others."** <sup>5</sup>

One aspect of a child's relationship with their primary caregiver that has a profound effect on the child's emotional development is attachment. Attachment is the element of the relationship between a child and caregiver that is involved with making the child safe, secure and protected.<sup>6</sup>

The attachment relationship has been categorised into four main types, with each having specific behaviours relating to security and safety that emerge from when the child is 6 months:

- A secure attachment to their primary caregiver makes the child feel safe, secure and protected, and able to explore the world, returning to the comfort and safety of the caregiver when needed.
- An insecure attachment is when the child is uncertain that they can rely on their caregiver/ parent being available or providing comfort and safety when in distress. There are two main types of insecure attachment. Insecure-ambivalent attachment is when, as a result of feeling insecure, the child is wary of exploring away from the caregiver, and gets angry and upset at the caregiver when reunited after being separated. Insecure-avoidant attachment is when the child is emotionally distant, avoiding or ignoring the caregiver altogether as a result of the insecurity of their relationship with that caregiver.

<sup>5</sup> Social Exclusion Task Force. (2006). *Reaching Out: An action plan on social exclusion*. London: HM Government. <sup>6</sup> Benoit, D. (2004). Infant-parent attachment: Definition, types, antecedents, measurement and outcome. *Paediatrics & Child Health*, 9(8), 541–545.





- The final category, disorganised attachment, is when the child seems to lack any sort of structured approach to the lack of security from their caregiver. This disorganisation leads to incoherent sequences of behaviour such as trying to be near the caregiver, then showing fear and trying to escape from them.

In the general population, 60 - 65% of infants are categorised as Securely Attached, with 25% Insecure-Avoidant, 10% Insecure-Ambivalent and around 15% (depending on the study) Disorganised. In high-risk populations, however, where families face multiple problems, up to 66% of children are insecurely attached.<sup>7</sup>

The type of attachment an infant has to their primary caregiver in their early years has a far-reaching impact on their emotional functioning in the short and long term. Studies have found that infants with a secure attachment to their primary caregiver tend to be better at regulating their emotions as adults and develop emotional resilience – the ability to maintain competent functioning despite stressful life circumstances and to recover from traumatic events.<sup>8, 9, 10</sup>

Conversely there is evidence that an insecure attachment is related to the development of problematic behaviour in children<sup>11</sup> and increases the risk of a range of mental health disorders as an adult.<sup>12</sup> There is also evidence that a disorganised attachment is a powerful predictor of more serious psychological dysfunction and maladjustment in children.<sup>13</sup>

The key role that a child's attachment has on their emotional development and later emotional health suggests that in an intervention promoting healthy emotional development in infants, the creation of a secure attachment between child and caregiver is an important outcome.

It is worth noting that the majority of research on attachment to date has focused on the mother as the primary caregiver and key attachment figure. A body of evidence looking at attachment between fathers and other caregivers has begun to be established but the overwhelming majority is still focused on mothers. As a result much of the evidence referenced in the report relates to the mother - child relationship.

<sup>7</sup> van Ijzendoorn, M.H., Schuengel, C., & Bakermans-Kranenburg, M. (1999). Disorganized attachment in early childhood: Meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology*, 11(2), 225-49. <sup>8</sup> The Royal College of Psychiatrists in Scotland. (2015). *Healthy start, healthy Scotland: Improving the mental health of mothers and babies for Scotland's future*. [Briefing paper]. <sup>9</sup> Zeanah, C. H. & Zeanah, P. D. (2009). The scope of infant mental health. In C. H. Zeanah (Ed.) *Handbook of infant mental health* (pp. 5-21). New York: Guilford Press. p. 12. <sup>10</sup> Masten, A. S. & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments. Lessons from research on successful children. *American Psychology*, 53(2), 205-220. <sup>11</sup> Fearon, R. P. (2010). The significance of insecure attachment and disorganization in the development of children's externalizing behavior: A meta-analytic study. *Child Development*, 81(2), 435-456. <sup>12</sup> Mikulincer, M., & Shaver, P. R. (2012). An attachment perspective on psychopathology. *World Psychiatry*, 11(1), 11-15. <sup>13</sup> Sroufe, L. A. (2006). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment and Human Development*, 7(4), 349-367.

# 03.

## Factors that affect attachment

Considering the implications of different attachment types, it is unsurprising that there has been a large amount of research into what increases the chance of a secure relationship being formed between the infant and their primary caregiver. There is some evidence that attachment begins before birth, with a field of study looking at Maternal Fetal Attachment (MFA).<sup>14</sup> The majority of research, however, focuses on attachment between the primary caregiver and infant once the infant is born. The model on the following page synthesises this evidence, illustrating the link between the baby's emotional development, quality of attachment, and the other factors that influence the attachment type.

The sections of this report that follow will explore the factors that contribute to infant attachment, how they interact with each other, and in what way they contribute to the infant's attachment type and therefore emotional development.



<sup>14</sup> Cannella, B. (2005) Maternal–fetal attachment: an integrative review. *Journal of Advanced Nursing*. 50 (1), 60 – 68

Model illustrating the factors contributing to a baby's emotional development and the relationship between them





## Parental sensitivity

One factor that has been repeatedly identified as having a strong association with a secure attachment type is parental sensitivity which, in the model, sits as a semi-circle around the attachment style.

Parental sensitivity is described by Gutman et al (2009) as “[t]he parent’s ability to be responsive and attuned to their children’s needs and to developmental tasks they face across childhood”.<sup>15</sup> In other words, it is the parents’ ability to register their infant’s signals, understand what the infant is trying to communicate and respond to the infant promptly and appropriately. For example, if a mother introduces a toy to her infant and the baby repeatedly turns away from the toy, refusing to engage, a sensitive response would involve the mother registering the child doesn’t like the toy and therefore stopping trying to use it. A lack of sensitivity would be if the parent continues to try to play, ignoring the child’s signals.

Studies have shown a strong association between sensitive parenting and a secure attachment.<sup>16</sup> For example, a study by Meins et al (2001) found that a caregiver’s ability to accurately read the mental states driving their infant’s behaviour predicts attachment security at 12 months.<sup>17</sup> Other evidence has shown that interventions that were more effective in enhancing parental sensitivity were also more effective in enhancing attachment security.<sup>18</sup> Studies have also looked at other positive emotional outcomes, rather than attachment security specifically, finding that the more sensitive a parent is to their infant’s signals and cues at two months, the better the infant’s cognitive and emotional development outcomes are.<sup>19, 20</sup>

### Behaviours associated with parental sensitivity

The development of different scales of parental sensitivity has resulted in different specific behaviours being seen as “sensitive”. There is, however, a substantial overlap between measures, with all using the underlying elements of a parent registering the infant’s signals, understanding them and responding appropriately and quickly.

For example, the Ainsworth Maternal Sensitivity Scale (AMSS),<sup>21</sup> is based on the premise that sensitive behaviour has four essential components: (a) a parent’s awareness of the child’s signals; (b) an accurate interpretation of them; (c) an appropriate response to them; and (d) a prompt response to them. The scale doesn’t include specific behaviours but instead contains

descriptions of a particular pattern of behaviours which lead to smooth interactions with the infant, and their infant’s needs being met. For example, the description of a highly sensitive mother is that: “This mother is exquisitely attuned to baby’s signals; and responds to them promptly and appropriately. She is able to see things from baby’s point of view; her perceptions of his signals and communications are not distorted by her own needs and defenses” whilst an insensitive mother “seems geared almost exclusively to her own wishes, moods, and activity.” By focusing on the aim of the caregiver’s behaviour, rather than specifying specific actions, this scale allows different behaviours to be classed as sensitive parenting in different contexts.

Another scale of maternal sensitivity, the Maternal Q Sort,<sup>22</sup> has 90 detailed behaviours that measure maternal sensitivity with regards to accessibility, responsiveness and promptness in responding to the child’s needs. Examples of sensitive behaviours in the scale include: “Mother arranges her location so she can perceive baby’s signals” and an example of insensitive behaviour being “Content and pace of interaction set by Mother rather than according to Baby’s responses.”<sup>23</sup>

Another way of viewing sensitive behaviour is linked more closely to the primary aim of the attachment: to make a child feel safe, secure and protected. Within this framework, sensitive behaviour is any behaviour that soothes an infant when their feelings of safety and security are threatened, such as when they are ill, physically hurt, emotionally upset or when frightened.<sup>24</sup>

Despite the variety of definitions of parental sensitivity there are common threads that run through all of them: sensitive behaviour consists of perceiving infant behaviour, correct interpretation of it and rapid and appropriate response to it, particularly when the child feels unsafe and insecure.

### Promoting sensitive behaviour

There is a well-evidenced link between parental sensitivity and secure attachment, and therefore the promotion of sensitive parenting behaviours is a promising way to help improve the likelihood of a secure attachment between parents and their children. To effectively promote sensitive parenting behaviour, however, it is necessary to understand what encourages and hinders such behaviour. It is these factors that are explored in the following sections of the report.

<sup>15</sup> Gutman, L. M., Brown, J. & Akerman, R., (2009). *Nurturing parenting capability: the early years*. London: Centre for Research on the Wider Benefits of Learning.

<sup>16</sup> Wolff, M. S., van Ijzendoorn, M. H. (1997). Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. *Child Development*, 68(4), 571–591. <sup>17</sup> Meins, E., et al. (2001). Rethinking Maternal Sensitivity: Mothers’ Comments on Infants’ Mental Processes Predict Security of Attachment at 12 Months. *Journal of Child Psychology and Psychiatry*, 42(5), 637–648. <sup>18</sup> Bakermans-Kranenburg, M. J., van Ijzendoorn, M. H., & Juffer, F. (2003). Less is more: Meta-analyses of sensitivity and attachment interventions in early childhood. *Psychological Bulletin*, 129(2), 195–215. <sup>19</sup> Murray, L., et al. (1996). The Cognitive Development of 5-Year-Old Children of Postnatally Depressed Mothers. *Journal of Child Psychology and Psychiatry*, 37(8), 927–935. <sup>20</sup> Mikulincer, M., & Shaver, P. R. (2012). An attachment perspective on psychopathology. *World Psychiatry*, 11(1), 11–15. <sup>21</sup> Ainsworth, M. D. S., Bell, S. M., & Stayton, D. J. (1974). Infant–mother attachment and social development: Socialisation as a product of reciprocal responsiveness to signals. In M. P. M. Richards (Ed.), *The introduction of the child into a social world*. London: Cambridge University Press. <sup>22</sup> Pederson, D.R., Moran, G., & Bento, S. (1999). Maternal Behaviour Q-sort. Psychology Publications. Paper 1 <sup>23</sup> Ibid. <sup>24</sup> Benoit, D. (2004). Infant-parent attachment: Definition, types, antecedents, measurement and outcome. *Paediatrics & Child Health*, 9(8), 541–545. *Mental Health Journal* 29(4): 362–376.

**A note on reflective functioning** An emerging area of research closely related to sensitive parenting is that of reflective functioning. Reflective functioning is the capacity to reflect upon internal experiences (thoughts, emotions and intentions) that you or others may be experiencing, and link these to behaviours.<sup>25</sup> Reflective functioning allows parents to step back from their own feelings and reflect on what their child is feeling, and consequently this makes it easier for the parents to anticipate and respond sensitively and appropriately to their child's cues, especially in emotionally charged situations.<sup>26</sup> For example, if a baby in their pram starts to cry loudly in public, a parent with strong reflective functioning skills may interpret that the infant is crying because they can't see the parent and so are scared. They therefore approach the infant quickly and soothe them. A parent that lacks reflective functioning skills may not question the reason for the infant crying, feel angry

and stressed due to the crying and tell the infant off for being difficult.

As this area of research is relatively new there is a limited body of evidence but the evidence that does exist suggests reflective functioning is one of the cornerstones of parental sensitivity. For example, a longitudinal study has found that mothers with higher levels of reflective functioning demonstrated more sensitivity and less negativity when interacting with their infants. It also found that mothers of infants classified as having secure attachment had higher reflective functioning scores than mothers of infants classified as avoidant or disorganized. The mechanism by which reflective functioning was associated with attachment type was through parental sensitivity.<sup>29</sup> This evidence suggests that behaviours that promote reflective functioning may also contribute to more sensitive parenting.

## Self-efficacy

Self-efficacy is a person's belief in their ability to carry out an action to get an outcome.<sup>30</sup> It differs from confidence or self-esteem that relates to a person's general feelings about themselves and their self worth. In relation to parenting, parental self-efficacy (PSE) is a parent's belief in their ability to manage and influence the behaviour and development of their child.

As illustrated in the model, parental self-efficacy plays a central role in a parent's likelihood of parenting sensitively, and therefore contributes substantially to attachment type. Comprehensive reviews report that high PSE is associated with maternal sensitivity and responsiveness to children's needs,<sup>31</sup> as well as other behaviour such as warm and affectionate parenting behaviour.<sup>32</sup>

Conversely, low PSE has been associated with coercive discipline or hostile parenting (both insensitive parenting behaviours), as well as a tendency to give up easily when faced with parenting challenges.<sup>33, 34</sup>

There has been substantial work conducted into how to increase a person's self-efficacy. The psychologist Albert Bandura, known for his extensive research in this field, articulated four main ways an individual's self-efficacy can be increased:<sup>35</sup>

- **If the individual has done something before and seen a good outcome their self-efficacy around that action will increase.** In a parenting context this could be using a technique to help soothe your baby, seeing it is

effective and as a result having more belief in yourself that you can soothe your baby effectively.

- **If the individual sees others successfully doing something it can increase their self-efficacy around doing that action.** In a parenting context this could be witnessing other parents, similar to yourself, coping with particular challenges which makes you feel like you can cope.
- **If the individual is given verbal encouragement this can increase their self-efficacy.** In a parenting context this could be being told by a health visitor/ friend that you are doing a good job at soothing your child.
- **If an individual feels physiologically good/ well this can boost feelings of self-efficacy.** In a parenting context this could be feeling positive and energised in contrast to feeling physically stressed and exhausted, and worrying this will impact your ability to carry out parenting activities well.

However, PSE does not act in a vacuum and, as the model shows, there are multiple different influences on a parent's ability to build parental self-efficacy and to parent sensitively. Some of these factors impact on self-efficacy, indirectly impacting parental sensitivity, whilst others also directly impact on the ability to parent sensitively. The sections below move through factors shown in the outer ring of the model, describing each factor, and how it influences self-efficacy and other elements in the model.

<sup>25</sup> Rosenblum, K. L., et al. (2008). Reflection in thought and action: Maternal parenting reflectivity predicts mind-minded comments and interactive behavior. *Infant Mental Health Journal* 29(4): 362-376. <sup>26</sup> Sharp, C. & Fonagy, P. (2008). The Parent's Capacity to Treat the Child as a Psychological Agent: Constructs, Measures and Implications for Developmental Psychopathology. *Social Development*, 17(3), 737-754. <sup>27</sup> Slade, A. et al. (2005). Maternal reflective functioning, attachment, and the transmission gap: a preliminary study. *Attachment & Human Development*, 7(3), 283-298. <sup>28</sup> Ibid. <sup>29</sup> Stacks, A. M. et al. (2014). Maternal reflective functioning among mothers with childhood maltreatment histories: Links to sensitive parenting and infant attachment security. *Attachment & Human Development*, 16(5), 515-533. <sup>30</sup> Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman. <sup>31</sup> Ainsworth, M. D. S., Bell, S. M., & Stayton, D. J. (1974). Infant-mother attachment and social development: Socialisation as a product of reciprocal responsiveness to signals. In M. P. M. Richards (Ed.), *The introduction of the child into a social world*. London: Cambridge University Press. <sup>32</sup> Coleman, K., & Karraker, K. (1997). Self-efficacy and parenting quality: Findings and future applications. *Developmental Review*, 18(1), 47-85. <sup>33</sup> Coleman, K., & Karraker, K. (1997). Self-efficacy and parenting quality: Findings and future applications. *Developmental Review*, 18(1), 47-85. <sup>34</sup> Jones, T., & Prinz, R. (2005). Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical Psychology Review*, 25(3), 341-363. <sup>35</sup> Bandura, A. (1977). Self-efficacy: Towards a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-213.



## Economic and environmental context

The environment into which a child is born, and the stressors that a parent experiences in their daily life, can affect a parent's emotional state, and therefore the child's emotional development. Living in poverty, with all the associated stressors, has been found to increase a child's risk of poor emotional development. For example, the rate of disorganised attachment, the highest-risk category, is disproportionately high among low socio-economic status mothers and teenage parent families (25%, compared to 15% in the general population).

The mechanism through which poverty has these negative impacts on a child's attachment status and emotional development are numerous and complex. The complexity arises because poverty impacts lives well beyond the financial sphere, extending to a parent's environmental, social and psychological situation as well. Some of the ways poverty can affect a baby's emotional development are described below, although it should be noted that all factors are closely interlinked.

### Daily stressors take up emotional bandwidth

Living in poverty increases the number of stressors an individual has to face on a daily basis. These include financial strains, poor housing, busy or irregular work

schedules and family instability, many of which are particularly prevalent in low income families.<sup>36, 37, 38, 39, 40</sup> Continually dealing with these stressors may lead to them having less emotional bandwidth for their child, with evidence showing that living in poverty is associated with lower levels of warmth and maternal responsiveness.<sup>41, 42, 43, 44, 45</sup> Living in poverty has also, unsurprisingly, been shown to negatively impact parents' emotional wellbeing which, in turn, affects the quality of family interactions and increases the risk of insecure attachment relationships between parent and infant.<sup>46</sup>

### Stress impacts the infant directly

As well as impacting parents' sensitivity and attachment with their infant, the stress experienced by families in poverty can impact a child's emotional development directly. An infant's repeated exposure to stress can alter their neurobiological stress pathways, and weaken their ability to manage stress and adversity in later life.<sup>47</sup>

### Poverty reduces self-efficacy

Recent research has indicated that those in poverty have lower self-efficacy than those not in poverty.<sup>48, 49</sup> Lower self-efficacy is associated with lower parental sensitivity, and in turn a greater risk of insecure attachment between parent and child.

<sup>36</sup> Iacovou, M. & Berthoud, R. (2000). *Parents and employment: An analysis of low income families in the British Household Panel Survey*. <sup>37</sup> Green, H., et al. (2005). *Mental health of children and young people in Great Britain, 2004*. London: Office for National Statistics. <sup>38</sup> Haveman, R., & Wolfe, B. (1995). The determinants of children's attainment: A review of methods and findings. *Journal of Economic Literature*, 33(4), 1829-1878. <sup>39</sup> Kiernan, K. E. & Mensah, F. K. (2011). Poverty, family resources and children's early educational attainment: The mediating role of parenting. *British Educational Research Journal*, 37(2), 317-336. <sup>40</sup> Ryan, R., Claessens, A. & Markowitz, A. J. (2013). Family structure and children's behavior. *Focus*, 30(2), 11-14. <sup>41</sup> Brooks-Gunn, J., Klebanov, P. K. & Liaw F. (1995). The learning, physical, and emotional environment of the home in the context of poverty: The Infant Health and Development Program. *Children and Youth Services Review*, 17(1-2), 251-276. <sup>42</sup> Bolger, K. E., Patterson, C. J., & Thompson, W. W. (1995). Psychosocial adjustment among children experiencing persistent and intermittent family economic hardship. *Child Development*, 66(4), 1107-1129. <sup>43</sup> Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development*, 65(2), 649 - 665. <sup>44</sup> McLeod, J. D., & Shanahan, M. J. (1993). Poverty, parenting, and children's mental health. *American Sociological Review*, 58(3), 351 - 366. <sup>45</sup> McLloyd, V. C. (1990). The impact of economic hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Development*, 61(2), 311 - 346. <sup>46</sup> Knitzer, J. and Perry, D. F. (2009). Poverty and infant and toddler development: Facing the complex challenges. In C. H. Zeanah (Ed.) *Handbook of infant mental health* (pp. 135-152). New York: Guildford Press. <sup>47</sup> Shonkoff, J. P. & Garner, A. S. (2012). The Lifelong Effects of Early Childhood Adversity and Toxic Stress. *Pediatrics*, 129(1), 232-246. <sup>48</sup> Callender, E. J. & Schofield, D. J. (2016). The potential for poverty to lower the self-efficacy of adults with asthma: An Australian longitudinal study. *Allergy, Asthma & Immunology Research*, 8(2), 141-145. <sup>49</sup> Callender, E.J. & Schofield, D. J. (2016). The impact of poverty on self-efficacy: an Australian longitudinal study. *Occupational Medicine*, 66(4), 320-325.



### Poverty increases the risk of mental illness

Those living in more disadvantaged households are more likely to experience common mental disorders than those with higher levels of income.<sup>50</sup> Children and adults from households in the lowest 20% of household income are three times more likely to have common mental health problems than those in the richest 20%,<sup>51, 52</sup> and nine times as likely to have psychotic disorders.<sup>53</sup> These inequalities are perpetuated through generations, with those children who have a parent with a mental illness being at a significantly greater risk of developing mental health issues themselves.<sup>54</sup> Having a parent with mental illness has been shown to increase the risk of an insecure or disorganised attachment, and be detrimental to a child's emotional development outcomes (see following section on Emotional wellbeing for more detail).

### Poverty is linked to poorer quality housing/ built environment

Disadvantaged families often live in neighbourhoods that have poorer facilities and public spaces e.g. parks, reducing the opportunities for parents to explore and interact with their children. Housing density, which is often very high in low-income areas, has also been shown to be negatively associated with parental responsiveness.<sup>55</sup>

### More severe risks from poverty:

#### Increased risk of domestic violence

Domestic violence is more common amongst families in poorer household, particularly for women in households with an income of less than £10,000 whose risk of experiencing domestic violence is three and a half times higher than those in households of over £20,000.<sup>56</sup> Parents exposed to trauma, especially mothers suffering from domestic violence, have higher risks of developing post-traumatic stress disorder (PTSD) and panic disorders. The greater the symptoms of their traumatic experiences, such as dissociation, the lower the mother's self-efficacy, and the less likely they are to be able to imagine themselves as parents or develop secure attachments with their infants.<sup>57</sup>

#### Increased likelihood of teen parenthood

Underage pregnancy is substantially more common for girls from lower socio-economic backgrounds.<sup>58</sup> On average, research has found that teen mothers tend to be less sensitive and responsive to their infants. Research

has shown that they tend to be less able to read their child's cues for comfort, food and exploration, and are more likely to respond with detachment, intrusiveness or anger. They also engage less in affectionate behaviour. As a result, there is a higher rate of insecure and disorganised attachment styles among teen mothers and their infants.<sup>59</sup>

### Substance abuse

In general there is little correlation between substance misuse and poverty. For the minority of families in extreme poverty and deprivation, however, there is an increased risk of drug and alcohol misuse.<sup>60</sup> Mothers who abuse drugs and alcohol are more easily frustrated and emotionally detached, and have a tendency to overstimulate their infant. This leads to an increased risk of developing an insecure attachment relationship, especially of the disorganised style.<sup>61</sup>

### The protective role of a parent

Despite the stresses of poverty, and the corresponding increased risks of poor emotional development, evidence has also shown that parenting behaviour can protect against some of these risks. For example, maternal warmth and stimulating activities have been shown to increase resilience to the impact of poverty in five year old children.<sup>62</sup> There is also evidence to show that positive parenting can substantially increase the economic achievement of children living in poverty.<sup>63</sup>

#### Economic and environmental context:

**A summary** The economic and environmental context that a child is born into, particularly whether they live in poverty or not, influences how likely it is they have a healthy emotional development. Living in poverty impacts emotional development through multiple interlinking pathways that include both the impact of the environment on the parent, and also directly on the child. This isn't to say, however, that a child born into poverty will necessarily have poor emotional development, merely that their risk is higher than those not in poverty. Encouragingly studies have also shown that parenting behaviour can buffer a child against some of these risks.

<sup>50</sup> McManus, S., et al (Eds.). (2009). *Adult psychiatric morbidity in England, 2007: Results of a household survey*. Leeds: The NHS Information Centre for health and social care. <sup>51</sup> Green H, McGinnity A, Meltzer H, et al. (2005) *Mental Health of Children and Young People in Great Britain, 2004*. Office for National Statistics, London: The Stationery Office. <sup>52</sup> McManus S, Meltzer H, Brugha T, et al. (2009) *Adult Psychiatric Morbidity in England, 2007: Results of a Household Survey*. Health and Social Information Centre, Social Care Statistics, London. <sup>53</sup> Marmot M et al, *Fair Society, Healthy Lives: Strategic Review of Health Inequalities in England Post 2010*. The Marmot Review, London, 2010. <sup>54</sup> Beardslee, W. R., et al. (1996). Prediction of Adolescent Affective Disorder: Effects of Prior Parental Affective Disorders and Child Psychopathology. *Journal of the American Academy of Child & Adolescent Psychiatry*, 35(3): 279-288. <sup>55</sup> Evans, G. W., Maxwell, L. E. & Hart, B. (1999). Parental language and verbal responsiveness to children in crowded homes. *Developmental Psychology*, 35(4), 1020-1023. <sup>56</sup> Walby, S. & Allen, J. (2004). *Domestic violence, sexual assault and stalking: Findings from the British Crime Survey*. London: Home Office Research, Development and Statistics Directorate. <sup>57</sup> Slade, A. et al. (2009). The psychology and psychopathology of pregnancy: Reorganization and transformation. In C. H. Zeanah (Ed.) *Handbook of infant mental health* (pp. 22-39). New York: Guilford Press. <sup>58</sup> The Poverty Site. (2017) *Underage Pregnancies*. <sup>59</sup> Hans, S. L. and Thullen, M. J. (2009). The relational context of adolescent motherhood. In C. H. Zeanah (Ed.) *Handbook of infant mental health* (pp. 214-230). New York: Guilford Press. <sup>60</sup> Harkness, S., Gregg, P. & MacMillan, L. (2012). *Poverty: The role of institutions, behaviours and culture*. York: Joseph Rowntree Foundation. <sup>61</sup> Shulman, C. (2016). Risk factors in infant and early childhood mental health. In C. Shulman (Ed.) *Research and practice in infant and early childhood mental health* (pp. 81-100). Springer International Publishing. p. 86. <sup>62</sup> Kim-Cohen, J., et al. (2004). Genetic and environmental processes in young children's resilience and vulnerability to socioeconomic deprivation. *Child Development*, 75(3), 651-668. <sup>63</sup> Kiernan, K. E. & Mensah, F. K. (2011). Poverty, family resources and children's early educational attainment: the mediating role of parenting. *British Educational Research Journal*, 37(2), 317-336.

## Emotional wellbeing

Emotional Wellbeing is defined by the Mental Health Foundation as “A positive sense of wellbeing which enables an individual to be able to function in society and meet the demands of everyday life; people in good mental health have the ability to recover effectively from illness, change or misfortune.”<sup>64</sup> Emotional wellbeing can be seen as a spectrum, running from thriving and flourishing, to severe mental illness. The emotional wellbeing of a parent impacts the emotional development of their baby in a number of ways:

### The influence of emotional wellbeing in pregnancy

The emotional state of a mother during pregnancy has been shown to impact the emotional development of a child. For example, a mother’s anxiety levels at 32 weeks pregnant has been linked to behavioural and emotional problems in their child at age 4 (even after a range of controls are taken into account, including postnatal anxiety).<sup>65, 66</sup> Although genetics and postnatal care affect these outcomes, it is estimated that about 10-15% of emotional and behavioural outcomes are attributable to prenatal anxiety or depression.<sup>67</sup>

At a physical level, prolonged exposure to stress hormones in the womb, as a result of a pregnant mother experiencing severe anxiety, can raise foetal heart rate, over-stimulate stress response areas in the brain and alter the foetus’ brain architecture.<sup>68, 69</sup>

Alongside in utero transmission of stress, those mothers experiencing worse emotional wellbeing (depression and anxiety) during pregnancy had a lower quality of maternal-fetal attachment with their unborn child,<sup>70</sup> which increases the risk of poor attachment with their child post-birth. A high level of anxiety in a mother during pregnancy is also related to lower feelings of parental self-efficacy,<sup>71</sup> which could impact her ability to parent sensitively after birth.

### The influence of emotional wellbeing post-birth

The mental health and wellbeing of mothers post-birth has been shown to have a significant impact on their child’s emotional development and behaviour. For example, poor maternal mental health when their child is aged nine months and/or at three years is strongly

associated with poor child behaviour at age five. Children of mothers with mental health issues are also twice as likely to experience a childhood psychiatric disorder.<sup>72, 73, 74</sup>

Research has explored what the pathways are between a parent’s emotional wellbeing and their child’s. Whilst pre-birth the pathways were through in utero transmission of stress hormones, post-birth a parent’s emotional wellbeing impacts the baby’s development through the way the parent behaves.



Caring for a baby is enormously emotionally taxing. Without language, the only way for a baby to get its needs met by the parent is to express an emotion (e.g. distress) and get the parent to experience this emotion to a degree (which is why a baby’s cry feels so distressing to all that hear it). Parents should then respond sensitively to the emotion of the baby by e.g. soothing it, picking it up, feeding it, changing it etc. For the parent, continuously experiencing these strong emotions takes a great deal of resilience, and it can be emotionally exhausting. Consequently a parent needs to be emotionally stable and robust to handle these demands. The emotional demands from a baby come at a time when the parent

<sup>64</sup> Imperial College Healthcare NHS Trust website. <sup>65</sup> O'Connor, T.G., et al. (2002). Maternal antenatal anxiety and children’s behavioural/ emotional problems at 4 years. *British Journal of Psychiatry*, 180(6), 502–8. <sup>66</sup> Talge, N.M. Neal, C. Glover, V. (2007). Antenatal maternal stress and long-term effects on child neurodevelopment: how and why?. *Journal of Child Psychology and Psychiatry*, 48(3-4), 245–61. <sup>67</sup> Glover, V. (2014). Maternal depression, anxiety and stress during pregnancy and child outcome; what needs to be done. *Best Practice & Research Clinical Obstetrics and Gynaecology*, 28(1): 25–35. <sup>68</sup> Field, T. et al. (2004) Prenatal depression effects on the fetus and the newborn. *Infant Behaviour and Development*, 27 (2), p. 216–229. <sup>69</sup> Monk, C., et al. (2003). Effects of Women’s Stress-Elicited Physiological Activity and Chronic Anxiety on Fetal Heart Rate. *Development and Behavioral Pediatrics*, 24(1), 32–38. <sup>70</sup> Alhusen, J. L. (2008). A literature update on maternal-fetal attachment. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 37(3), 315–328. <sup>71</sup> Wenand, J. J., et al. (2014). Prenatal changes in parenting self-efficacy: linkages with anxiety and depressive symptoms in primiparous women. *Infant Mental Health Journal*, 35(1), 42–50. <sup>72</sup> Ghate, D. & Hazel, N. (2002). Parenting in poor environments: stress, support and coping. London: Jessica Kingsley Publishers. <sup>73</sup> HM Treasury, Department for Education and Skills. (2007). Policy review of children and young people: A discussion paper. London: Department for Education and Skills. <sup>74</sup> Meltzer, H., et al. (2003). The mental health of young people looked after by local authorities in England: summary report. London: The Office for National Statistics.



is also adjusting to the huge changes to their routine, sleep patterns and the life-changing responsibilities that accompany being a parent making this “emotional containment” even more challenging.

If a parent does not feel emotionally stable, or is unable to regulate their own mood or emotions, it can become challenging to continue to respond to the emotions and needs of the child, leading to less sensitive parenting behaviour. For example, depressive mothers are more likely to display low sensitivity, lack of enjoyment, intrusive behaviours, negative emotions and punitive behaviours during interaction with their infant, as well as have more negative perceptions of their infant’s behaviour.<sup>75</sup>

This lack of sensitivity is in line with findings that depressed mothers are less likely to have secure attachments with their children,<sup>76</sup> and more likely to have disorganised attachments.<sup>77</sup> There is also evidence showing that mothers who are more stressed whilst raising their child are less likely to have a secure attachment with them.<sup>78</sup>

Research has also explored the link between a parent’s emotional state and their parental self-efficacy, finding decreasing feelings of stress were associated with increasing levels of PSE.<sup>79,80</sup>

### Emotional wellbeing: A summary

A parent’s emotional wellbeing has a huge influence on their child’s emotional development. During pregnancy stress and anxiety can influence the fetus through hormonal transmission. Post-birth the wellbeing of the parent dictates the extent to which they are emotionally available for the infant, and sensitive to the infant’s needs. This evidence suggests interventions supporting the emotional wellbeing of parents, both before and after birth, could be an effective approach to increasing their sensitivity and increase the chances of a secure parent-child attachment.

## Social support

Social support is the feeling or experience of having others who love and care for you, who you can turn to for help in times of need, and it is generally classified into three main categories:

- Emotional support: the things people do to make us feel loved and cared for,
- Instrumental support: tangible help that others provide, and
- Informational support: help through the provision of information.<sup>81</sup>

For some, having a baby can provide an opportunity to develop or widen their social network and increase their social support whereas for others it is a time when their social network shrinks. Pregnancy and early years was singled out in a review of social isolation as one of the times in the life course that an individual is most vulnerable to social isolation due to factors including change of routine, financial pressures and time off work.<sup>82</sup> A survey by Netmums found that over a quarter of new mums (28%) felt lonely after their baby was born<sup>83</sup> whilst a survey by Family Action (UK) found that a fifth of the mothers interviewed did not feel they had friends or family nearby who they could turn to if they felt isolated through pregnancy or immediately after the birth of their child. This figure rose to one in three mothers from low-income households.<sup>84</sup>

### The benefits of social support

There is strong evidence that feeling socially connected and supported has both physical and psychological benefits. For example, within the general population the effect of levels of social support on life expectancy appears to be as strong as the effects of obesity, cigarette smoking, hypertension, or level of physical activity.<sup>85</sup> Psychologically, studies have found that the higher your level of social support, the less likely you are to experience major mental disorders such as PTSD,<sup>86</sup> panic disorder<sup>87</sup> or social phobia.<sup>88</sup> Those with high levels of social support are also less likely to experience

<sup>75</sup> Wan, M. W. & Green, J. (2009). The impact of maternal psychopathology on child–mother attachment. *Archives of Women's Mental Health*, 12(3), 123–134.  
<sup>76</sup> Atkinson, L. R., et al. (2000). Attachment security: A meta-analysis of maternal mental health correlates. *Clinical Psychology Review*, 20(8), 1019–1040.  
<sup>77</sup> Hayes, L. J., Goodman, S. H., & Carlson, E. (2013). Maternal antenatal depression and infant disorganized attachment at 12 months. *Attachment & Human Development*, 15(2), 133–153. <sup>78</sup> Atkinson, L. R., et al. (2000). Attachment security: A meta-analysis of maternal mental health correlates. *Clinical Psychology Review*, 20(8), 1019–1040. <sup>79</sup> Gross, D., Fogg, L. & Tucker, S. (1995) The efficacy of parent training for promoting positive parent–toddler relationships. *Research in Nursing & Health*, 18(6), 489–499. <sup>80</sup> Scheel MJ., Rieckmann, T. (1998). An empirically derived description of self-efficacy and empowerment for parents of children identified as psychologically disordered. *The American Journal of Family Therapy*, 26(1), 15– 27. <sup>81</sup> Seeman, T. (2008). *Support & social conflict: Section one - Social support*. San Francisco, CA: University of California. <sup>82</sup> Public Health England. (2015). *Local action on health inequalities Reducing social isolation across the lifecourse*. London: Public Health England. <sup>83</sup> AXA PPP Healthcare. (2015) *Overcoming feelings of isolation as a new parent*. <sup>84</sup> Public Health England. (2015). *Local action on health inequalities Reducing social isolation across the lifecourse*. London: Public Health England. <sup>85</sup> Sapolsky, R.M. (2004). *Why Zebras Don't Get Ulcers: The acclaimed guide to stress-related diseases and coping*. New York: Henry Holt and Company. <sup>86</sup> Brewin, C.R., Andrews, B. & Valentine, J.D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Social and Clinical Psychology*, 68(5), 748–766. <sup>87</sup> Huang, M., Yen, C. & Lung, F. (2010). Moderators and mediators among panic, agoraphobia symptoms, and suicidal ideation in patients with panic disorder. *Comprehensive Psychiatry*, 51(3), 243–249. <sup>88</sup> Torgrud, L., et al. (2004). Deficits in perceived social support associated with generalized social phobia. *Cognitive and Behavioral Therapy*, 33(2), 87–96.

sub clinical symptoms e.g. symptoms of depression and anxiety,<sup>89, 90</sup> indicating that social support can act as a buffer between an individual and the psychological impact of events in their life.

Within the context of parenting, studies have consistently shown that mothers with more emotional and instrumental support are less likely to experience postpartum depression<sup>91</sup> which, as discussed above, has implications for parental sensitivity and attachment. Studies have also found a strong link between perceived social isolation (or perceived lack of social support) and depressive symptoms after birth.<sup>92, 93</sup> Interestingly, it may be that the perception of support alone is sufficient to reduce the risk of postnatal depression as there is evidence of a relationship between perceived support and depressive symptoms, but not with actual levels of support.<sup>94</sup>

Social support has also been shown to have a relationship with parental self-efficacy, with studies finding that those mothers who felt they had high social support had higher levels of PSE than those who didn't feel they had social support.<sup>95, 96</sup>

For disadvantaged families, social support has been shown to play a particularly positive role, contributing to resilience in children<sup>97</sup> and moderating the effects of stress on parenting.<sup>98</sup> Conversely, a lack of social support has been linked to an increased risk for child maltreatment.<sup>99</sup>

### Social support: A summary

The studies in this section demonstrate the powerful emotional and practical role that social support can play in a parents' life, supporting parents' emotional wellbeing and parental self-efficacy, which in turn improves the likelihood of sensitive parenting and a secure attachment. It highlights social support, therefore, as another area which an intervention could focus on.

## Parenting knowledge

The final factor that affects sensitive parenting relates to the caregiver's parenting knowledge. The definition of Parenting Knowledge varies within studies but it is generally seen to include knowledge of:

- Developmental norms and milestones (e.g. when a baby will start to respond to their name being called);
- Processes of child development (e.g. memory development) and;
- Familiarity with caregiving skills (e.g. how to feed, bathe and soothe a child)

It has been hypothesised that parental knowledge of children's developmental norms and milestones provides parents with a framework for understanding and anticipating the changes that will happen to their child.<sup>100</sup> The suggestion is that armed with this knowledge the parent won't expect behaviour from their child that is unrealistic for their stage of development and therefore they will parent more sensitively and appropriately.

Some studies have shown a link between greater parental knowledge of developmental stages and milestones and sensitive parenting. For example, in one study mothers with higher knowledge of the developmental stages involved in play (e.g. when a child may move from simple exploration to full play) responded more sensitively to their child's initiations<sup>101</sup> while other studies have shown that higher knowledge of infant and child development has also been linked to higher level parenting skills.<sup>102, 103</sup>

Conversely, mothers with inaccurate expectations about their child's development tend to be more harsh towards their children.<sup>104, 105</sup>

Other studies, however, haven't found a link between teaching about developmental stages and a child's developmental outcomes.<sup>106</sup> In a review of 20 studies examining the anticipatory guidance given to new parents about parenting, Regalado and Halfon (2002)

**89** Barrera, M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology*, 14(4), 413-445.  
**90** Cohen, S & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310-357. **91** Stewart, M. D., et al. (2003). *Postpartum depression: Literature review of risk factors and interventions*. Toronto: University Health Network Women's Health Program. **92** Forman, D. N., et al. (2000). Postpartum depression: Identification of women at risk. *British Journal of Obstetrics & Gynaecology*, 107, 1210-1217. **93** Seguin, L., Potvin, L., St Denis, M., & Loiselle, J. (1999). Depressive symptoms in the late postpartum among low socioeconomic status women. *Birth*, 26(3), 157-163. **94** Logsdon M., et al (2012). Identification of mothers at risk for postpartum depression by hospital-based perinatal nurses. *MCN: The American Journal of Maternal Child Nursing*, 37(4), 218-225. **95** Leahy Warren, P. (2005). First-time mothers: social support and confidence in infant care. *Journal of Advanced Nursing*, 50, 479-488. **96** Shorey, S., et al. (2013). Maternal parental self-efficacy in newborn care and social support needs in Singapore: a correlational study. *Journal of Clinical Nursing* 23(15-16), 2272-2283. **97** [https://www.researchgate.net/publication/13813401\\_Children\\_who\\_prosper\\_in\\_unfavorable\\_environments\\_The\\_relationship\\_to\\_social\\_capital](https://www.researchgate.net/publication/13813401_Children_who_prosper_in_unfavorable_environments_The_relationship_to_social_capital). **98** Hashima, P. Y., & Amato, P. R. (1994). Poverty, social support, and parental behavior. *Child Development*, 65, 394 - 403. **99** Bishop, S. J., & Leadbeater, B. J. (1999). Maternal social support patterns and child maltreatment: Comparison of maltreating and nonmaltreating mothers. *American Journal of Orthopsychiatry*, 69, 172 - 181.; **100** Stoiber K.C. & Houghton T.G. (1993). The relationship of adolescent mothers' expectations, knowledge, and beliefs to their young children's coping behavior. *Infant Mental Health Journal* 14(1), 61-79. **101** Damast, A. M., Tamis-LeMonda, C. S. & Bornstein, M. H. (1996). Mother-child play: Sequential interactions and the relation between maternal beliefs and behaviors. *Child Development*, 67(4), 1752-1766. **102** Benasich A.A. & Brooks-Gunn, J. (1996) Maternal attitudes and knowledge of child-rearing: Associations with family and child outcomes. *Child Development*, 67(3),1186-1205. **103** Huang K.Y., et al. (2005). Maternal knowledge of child development and quality of parenting among White, African-American and Hispanic mothers. *Journal of Applied Developmental Psychology*, 26(2), 149-170. **104** Azar, S.T., et al. (1984). Unrealistic expectations and problem solving ability in maltreating and comparison mothers. *Journal of Consulting and Clinical Psychology*, 52(4), 687-691. **105** Fry, P.S. Relations between teenagers' age, knowledge, expectations and maternal behaviour. *British Journal of Developmental Psychology* 3(1), 47-55. **106** Regalado, M. & Halfon, N. (2002). *Primary care services: Promoting optimal child development from birth to three years*. Commonwealth Fund.



state that the teaching of development stages may increase knowledge of the parents, but that this may not necessarily improve a child's outcomes. Instead, they point to studies where teaching of specific care-giving techniques, such as how to encourage your child to sleep better, were found to both improve the behaviour of the child (better sleep patterns) and also increase the confidence of the parent around that behaviour/ area.

Further studies have begun to look at the relationship between parental knowledge and parental self-efficacy, with some interesting results. A key study in this area found that neither parental self-efficacy nor parental knowledge (which included knowledge of care-giving practices, developmental processes and milestones) independently contributed to how competent a parent was. Instead, the study found that the impact on the child was related to a combination of both knowledge and self-efficacy. In a group of mothers with high parental knowledge, those with greater PSE played more positively with their child than those with lower PSE. In the group of mothers with low parental knowledge, those with high PSE played worst with their child - as they were confidently applying poor knowledge to the play situation.<sup>107</sup>

#### **Parenting knowledge: A summary**

The interaction between parental knowledge, sensitive parenting and self-efficacy is a complex one. The limited research on knowledge of development stages suggests that knowing about stages is necessary for optimum parenting but not sufficient on its own to increase a parent's sensitivity. It is the combination of knowledge and high self-efficacy which leads to higher sensitivity.

There is also evidence which suggests that knowledge of specific care-giving techniques e.g. how to encourage sleeping, can improve the outcome of the activity (e.g. the infant sleeps better), and that this in turn is also related to increased parental self-efficacy. This suggests that knowledge-based interventions aiming to increase the likelihood of healthy emotional development of babies should combine knowledge with self-efficacy boosting activities, or make the knowledge focused on specific activities or behaviours.

<sup>107</sup> Hess, C. R., Teti, D. M. & Hussey-Gardner, B. (2004). Self-efficacy and parenting of high-risk infants: The moderating role of parent knowledge of infant development. *Journal of Applied Developmental Psychology* 25(4), 423-437.



# 04.

# Conclusion

The first thousand days of a child's life is a crucial time in their development and the experience they have during this time will shape their emotional development, underpinning their future emotional wellbeing. This sensitive time period presents a huge opportunity for preventative interventions, helping support healthy emotional development before problems arise rather than dealing with them when they emerge. As with all preventative approaches, intervening early is better for the individuals, those around them and for the finances of healthcare institutions.

Each factor this report identified as contributing to secure attachment offers the opportunity to support new parents in a different way, and offers a different route to prevention. Some, such as economic and environmental context, may require intervention at the community or society level, including co-ordinated policy changes within areas such as housing, welfare and economic policy. Others, including social support, emotional wellbeing and parental knowledge, can also be tackled at the individual level, with interventions targeted directly at parents.

The model that has been laid out in this report visually represents these factors, their relationships to one another, and how they contribute to the development

of a secure attachment and healthy emotional development of a child.

As well as being useful for us here at Shift, we hope that this model is useful for other practitioners or designers in the field, and can be used as a way of identifying design opportunities as well as demonstrating the way in which interventions in each area could contribute to the development of healthy infant emotional development.

## **Next steps:**

Shift is using the evidence from this report as the foundation for the development of a digital product to boost the self-efficacy of parents of children aged 0 - 2. As part of the product development process, we are also drawing on insights collected through our user research, which will be published in a separate report later in the year.

For more information see our website (<http://shiftdesign.org.uk/products/0-2s/>) where we will be giving frequent updates on our progress. If you would like to hear more about the research, get in touch with Naomi Stoll, Research Manager or if you want to hear more about our products, please contact Tayo Medupin, Innovation Lead.

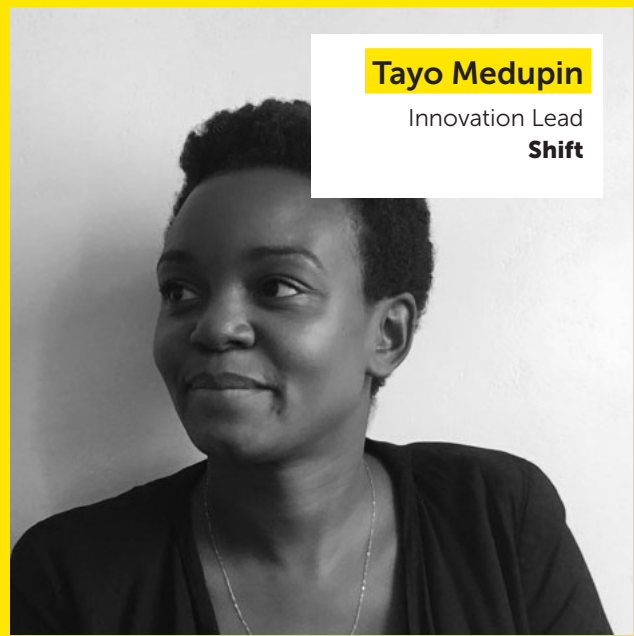
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