

Peep Reflective Parenting Programme (Pilot):

A therapeutic intervention beginning in late pregnancy

Brief interim findings: main messages



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people supporting parents and
children to learn together

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Introduction and background

This brief report presents the initial findings of the Peep Reflective Parenting Programme pilot which ran from August 2012 to May 2013 with a small sample of parents. It focuses on the analysis of two primary measures: Parent Development Interview (PDI) and Crittenden CARE-Index; and two secondary measures: Parental Stress Index (PSI) and Hospital Anxiety and Depression Scale (HADS). These initial findings are based on a small sample (n=10) and should be regarded with caution.

The long term psychological, emotional and mental health outcomes and life chances of babies born today are affected by a range of protective and risk factors. One in ten children in the UK suffers a psychological or behavioural problem that interferes with their quality of life and capacity to achieve (CAMHS Review, 2008). As many as one in four do not enjoy a sufficiently safe and secure attachment with a parent or carer (Sutton Trust, 2014). Yet there are limited early preventative interventions or programmes concerned with the psychological and emotional wellbeing of babies and children and their parents. Added to this are social changes leading a decline in close family and social networks to offer families early support, advice and resources.

An early secure attachment relationship with one or both parents is known to be highly protective of babies' psychological and emotional wellbeing and mental health (Goldberg, 2000; Slade et al, 2005). It is powerful in mitigating a number of high risk factors including deprivation and trauma, acting as a 'buffer' from the psychological stress response (Prior and Glaser, 2006). However, insecure attachments are strongly linked to a range of maladaptive behaviours including aggression and hostility, anti-social behaviour, negative affect, anxiety and dissociation (*ibid.*, 2006). Research from neurobiology, developmental psychology, infant mental health and genetics has converged in its recognition that secure attachment is formed in the context of the earliest parent-infant relationship (Shore, 1994; Panksepp, 1998; Siegal, 1999; Gerhardt, 2004; Cozolino, 2006). Specifically, secure attachment is made operational through parental reflective functioning in relation to the baby (mind-to-mind relationship) and through the influence of the parent on the baby's neurodevelopment (brain-to-brain relationship).

Parental reflective functioning has been shown to be a key capacity underlying maternal sensitivity and attunement, the precursors of secure attachment (Fonagy et al, 2002, 2004). This reflective functioning, also known as mentalising or mind-mindedness (Meins, 1998) is the ability of the parent to recognise their baby as an intentional being with thoughts, feelings, beliefs, and desires. Reflective function (RF) provides a tool through which behaviour can be interpreted or understood in terms of underlying mental states (Fonagy et al, 1998).

The parent's RF allows the baby to develop a reflection of themselves in the parent's mind. Their self-state is acquired from the mental state of their parent (Fonagy et al, 2002, 2004). This exploration of another's actions, responses and states in order to construct a self-state is linked to the development of key psychological capacities; affect regulation, impulse control, self-monitoring and an experience of self-agency (*ibid.*). Babies are better able to 'read' others' minds and make sense of others' behaviour. Reflective functioning is not introspective; it is not the ability to apply theory of mind to one's own mental states but the ability to know minds in general.

From the neurobiological perspective, babies are born with no ability to control their affect. It is the baby's relationship with the parent beginning in pregnancy which mediates the capacity for affect

regulation. The baby's hypothalamic-pituitary-adrenocortical (HPA) system produces and regulates glucocorticoid cortisol in response to stress (Gunnar, 1996). This system is becoming organised by the age of two months and is directly affected by the sensitive (or not) responses by the parent to the baby's distress. Sensitive parents act as a 'container' or moderator of the reactivity of the HPA system (Nelson and Bosquet, 2000). Insensitive parents who fail to meet their baby's needs allow her to be exposed to high levels of stress hormones. This directly effects the development of neural pathways in the infant brain (Gunnar, 1996). This is seen in the dysregulation in children who suffered abuse as a baby or toddler compared to children who suffered maltreatment later in their development (Cicchetti, 2010) even when the maltreatment had stopped (Ward et al, 2011).

As we have seen, RF is clearly established as underpinning the precursors of secure attachment. The impact of the parent-infant relationship on the baby's earliest neurodevelopment has also been established. Given the vast body of research showing the relationship between secure attachment and positive outcomes for babies, it is clear that an early therapeutic parenting programme embodying these concepts is highly desirable.

Pregnancy represents a significant time of change for parents and offers an opportunity for effective intervention. A programme which translates evidence-based theory of attachment, RF and neurobiology into effective practical activity for expectant parents would have the potential to get the earliest parent-baby relationship off to the very best start. The programme would explicitly need to:

- develop parental capacity to keep their baby in mind
- help parents learn how to attend to their baby's internal experiences
- support parents to recognise and respond to their baby's behaviour as indication of and communication of underlying mental states
- equip parents with knowledge about their baby's early brain development.

The therapeutic parenting programme design and delivery

The Reflective Parenting Programme has been designed and developed by Warwick Infant and Family Wellbeing Unit, Warwick Medical School, Warwick University on behalf of and in collaboration with People. People is an Oxford-based charity established in 1995 whose aims are to help:

- parents/carers to improve their children's life chances
- all parents to create the best start for their children by making the most of everyday learning opportunities at home – listening, talking, playing, singing and sharing books.

The Reflective Parenting Programme has been developed using evidence-based theory of parental change including mind-mindedness, mentalisation and reflective functioning. The programme build on the Peep Learning Together Programme. Using a strengths-based, goal-orientated, therapeutic relationship based on a partnership model of working together, the course aims to:

- develop the parental capacity for reflective functioning
- develop and foster healthy secure attachment between parent and baby
- support the development of sensitive and reflective parenting
- promote parental confidence and self-esteem
- develop and promote social support and networking for parents

Two Peep practitioners (PP) helped to finalise the programme content and have delivered a total of three small groups of eight practical sessions. In addition to their extensive Peep training and experience, these practitioners received additional Peep Reflective Parenting Training in the promotional interview technique, parental reflective functioning and its role in secure attachment relationship and translating evidence-based theories of parental change into practical activities for parents.

The programme can be delivered flexibly, but in this study consisted of a total of eight sessions; the first session is a home visit and subsequent sessions are group-based and take place at a local community venue. The programme is divided into two phases; an antenatal phase and a postnatal phase:

Antenatal phase: Sessions 1 to 4

1. Home-based visit from PP – relationship-building between practitioner and parent using PP home visiting experience and promotional interview (opportunity for additional home visit as required)
2. Group-based session: Getting to know each other
3. Group-based session: All change!
4. Group-based session: Baby's first 'language'

Postnatal phase: Sessions 5 to 8

5. Group-based session: Look what I can do – my social baby
6. Group-based session: You are your baby's world
7. Group-based session: Building a brain
8. Group-based session: How are we getting on?

Methodology and methods

Study design

The pilot study took place from August 2012 to May 2013 and data was collected from a total of ten parents. The groups were based on a housing estate in south Oxford.

Data was collected from participating parents at four data collection points during the study:

1. Before the intervention programme begins (between 30-32 weeks of pregnancy)
2. Midpoint (after four antenatal sessions and following the baby's birth)
3. Post-intervention programme
4. Follow-up (when the baby is 6 months old)

A number of parent case studies are planned. This will enable an exploration of the factors associated with families which change and those which do not.

Sample

Women included in the study sample:

- are pregnant (approximately 28-30 weeks gestation and in good health)
- are expecting their first baby
- are living within the defined geographical area(s) associated with low socio-economic status

- have a good understanding of spoken English

Methods

The primary measures utilised in the study are:

- Parent Development Interview (PDI) - pregnancy and infancy versions
- Crittenden CARE-Index

The secondary measures are:

- Hospital Anxiety and Depression Scale (HADS)
- Parental Stress Index Short Form (PSI/SF)

Parent Development Interview (PDI)

The Parent Development Interview (PDI)(Aber et al, 1985; Slade et al, 2003) is a semi-structured clinical interview which examines and explores parents' representations of their children and their relationships with them and representations of themselves as parents. This measure has been specifically designed to measure parental reflective functioning within the evolving parent-child relationship and has been widely validated and adapted for use across a number of specific groups of parents. This study uses the pregnancy and infancy versions.

The pregnancy version (Slade et al, 1987; Slade, 2001) is a semi-structured clinical interview that has been shown to predict to adult attachment classification. The interview uses 22 questions to assess the quality of a mother's representation of her relationship with her unborn child. She is asked to describe both her current relationship with her unborn baby and how she imagines this relationship will develop once the baby is born. The interview also explores the emotional challenges of pregnancy; how the mother's relationship with her own mother has developed and changed since becoming pregnant; and the mother's representation of herself as a caregiver especially with relation to her ability to recognise and respond to her infant's needs.

This interview is administered at data collection point 1 before the intervention programme begins (28-32 weeks gestation).

The infancy version is 32-item interview in which a parent is asked to describe their child's thoughts, feelings and behaviours in a variety of situations and their own responses to the child. The parent is also asked to describe him/herself as a parent and to discuss emotions stimulated by the experience of parenting. The interview evaluates the extent to which a parent understands their own internal experiences and their child's.

Both versions rate RF capacity in parents on a scale of -1 to 9 and scores can be translated into common types:

- -1 (A) rejection of RF and -1 (B) unintegrated, bizarre or inappropriate
- 1 lacking in RF, 1(A) disavowal and 1(B) distorting or self-serving
- 3 questionable or low RF, 3(A) naive-simplistic, 3(B) over-analytical or hyperactive RF and 3(C) miscellaneous low RF
- 5 ordinary RF, 5(A) ordinary understanding, 5(B) inconsistent level of understanding

- 7 marked RF
- 9 exceptional RF

The infancy version is administered at data collection points 3 and 4.

Crittenden CARE-Index

The CARE-Index (Crittenden, 1986) assesses mother-infant interaction from birth to about two years of age based on a short, videotaped play interaction of 3-5 minutes. The measure assesses mothers on three scales: sensitivity, control and unresponsiveness. There are also four scales for infants: cooperativeness, compulsivity, difficultness, and passivity. The scales are highly correlated with the infant Strange Situation assessment patterns of attachment and differentiate abusing from neglecting, abusing-and-neglecting, marginally maltreating, and adequate dyads. The measure is used to assess the effectiveness of intervention.

The Hospital Anxiety and Depression Scale (HADS)

The Hospital Anxiety and Depression Scale (Zigmond and Snaith, 1983) is a short 14-item scale for detecting clinically significant depression and anxiety in outpatient settings. It is widely used with clinical populations and excludes items that might reflect physical illness.

The HADS is administered at data collection points 1, 2, 3 and 4.

Parental Stress Index Short Form (PSI/SF)

The PSI Short Form (PSI/SF) (Abidin, 1995) is a shortened version of the Parenting Stress Index (PSI) full-length questionnaire. The 36-items of the PSI/SF give a total stress score on three scales: parental distress, parent-child dysfunctional interaction and difficult child. High scores on this well-validated measure have been associated with abusive parenting (Lacherite et al, 1999; Mash et al, 1983) and recent studies have found that parenting stress is higher in women with five or more risk factors associated with child abuse (Nair et al, 2003).

The PSI/SF is administered at data collection points 2, 3, and 4.

Brief interim findings

As stated in the introduction to this report, these brief interim findings are based on a small sample of parents (n=10) recruited to the study pilot which ran from August 2012 to May 2013. These data need to be regarded with caution owing to the small sample size. These findings are based on initial analysis of the primary study measures; Parent Development Interview (PDI) and Crittenden CARE-Index; and two secondary measures; Parental Stress Index (PSI) and Hospital Anxiety and Depression Scale (HADS).

Table 1 shows the timing of the use of the primary and secondary measures alongside the intervention programme.

Table 1: Timing of the use of the primary and secondary measures

	Pre-intervention		Mid-intervention		Post-intervention	Follow-up at six months
Reflective Parenting Programme (Peep)		Antenatal sessions 1-4	Break for baby's birth	Postnatal sessions 5-8		
PDI – Pregnancy version	X					
PDI – Infancy version					X	X
CARE-Index			X		X	X
Parental Stress Index (PSI)			X		X	X
Hospital Anxiety and Depression Scale (HADS)	X		X		X	X
Maternal Object Relations Scale (MORS)			X		X	X

Parent Development Interview (PDI) - pregnancy and infancy versions

This is the primary study method employed because it represents an index of the parental ability to regard the infant as a psychological agent and evidences any change in Reflective Functioning (RF) capacity.

The Pregnancy version of the PDI is conducted at approximately 32 weeks of pregnancy prior to the commencement of the Reflective Parenting programme.

The Infancy version of the PDI is conducted approximately 10-12 weeks after the birth of the baby following the end of the Reflective Parenting programme.

Potential scores range from -1 to 10 (low to high RF) where 5 is considered an average score. For example, a score of 3 may be given to a parent who can use some words to describe thoughts and feelings but does not recognise the impact of her own thoughts and feelings on the emotional state of her baby and vice versa. A score of 5 would indicate a mother's basic understanding of her baby's thoughts and feelings and her own and how these may interact, impact and effect each other.

The Pregnancy version scores collected during the initial pilot intervention groups ranged from 3 to 6. This represents a baseline score prior to the commencement of the intervention.

The Infancy version scores were collected directly following the completion of the intervention groups and these scores ranged from 4 to 7.

Table 2: Clinical categories pre-, mid and post-intervention

	<i>Pre-intervention</i>	<i>Mid-intervention</i>	<i>Post-intervention</i>
Rejection of RF	0	0	0
Lacking in RF	2	1	1
Low RF	6	5	4
Ordinary RF	2	4	4
Marked RF	0	0	1
Exceptional RF	0	0	0

An improvement can be seen in the RF score across the life of the study up until the end of the intervention groups. A further Infancy PDI will be conducted when the baby is six months old and will yield interesting data to compare with the immediate post-intervention results.

Crittenden CARE-Index

Crittenden CARE-Index is a videoed interaction between mother and baby lasting for around three minutes. It is conducted shortly after the birth of the baby – mid point between the antenatal sessions and post-natal sessions of the Reflective Parenting programme shortly after birth – and when the baby is around 10-12 weeks following the end of the Reflective Parenting Programme.

Scores are reported as follows:

1. Dyadic synchrony score
2. Overall relationship style
3. Clinical category: risk, inept, adequate and sensitive
4. Item-by-item scoring

The score of particular interest at this early point in the study analysis is the clinical category which places parents in one of four clinical groups; risk, inept, adequate and sensitive.

Table 3 shows the frequency of parents falling into each clinical category mid- and post-intervention group.

Table 3: Clinical categories mid- and post-intervention

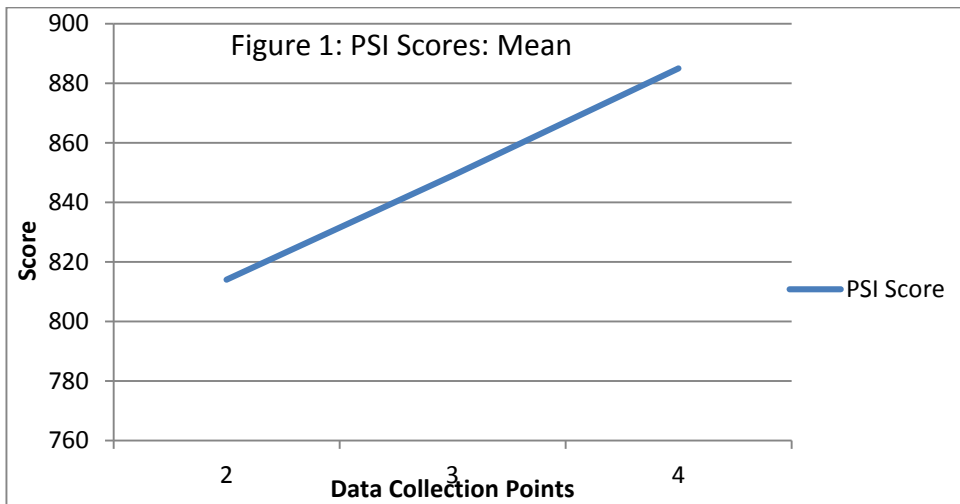
	Mid-intervention	Post-intervention
Risk	2	0
Inept	4	3
Adequate	4	5
Sensitive	0	2

It is clear that parental scores were able to change within a relatively short period of intervention. A further CARE-Index score taken when the baby is six months old will generate interesting data about the ongoing nature of the relationship between baby and mother.

Parental Stress Index (PSI)

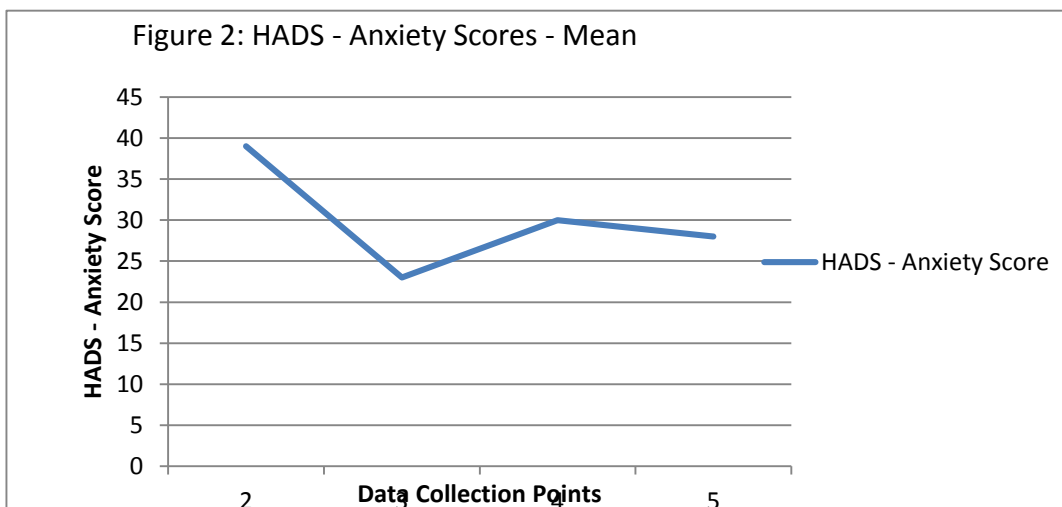
Interim analysis of the PSI scores show that parental perceptions of parenting as a stressful experience increases over the study period. This may indicate that the intervention does not itself affect parents' perceptions of the challenges of parenting very small babies. However, changes in other study measures may indicate that parents cope more positively with this stress or that this stress has limited relative impact as an independent variable. This potential finding warrants detailed study in the ongoing evaluation.

Figure 1 shows the mean PSI scores over data collection points 2, 3 and 4.



Hospital Anxiety and Depression Scale (HADS)

Initial examination of the anxiety domain scores collected via HADS reveal an interesting pattern which warrants further inquiry in the ongoing controlled evaluation. Parental anxiety before the intervention programme begins is at its highest. This is seen to reduce until the baby is born at which point it increases once again. This variable and its relative influence on individual outcomes will be fully explored in the final analyses.



Main messages from initial pilot

- Improvements have been seen in the reflective functioning capacity of parents when a small sample of pre-, mid and post-intervention scores are compared.
- Parents are less intrusive and more inclined to think about – and articulate - their baby’s thoughts and feelings; a key indicator of reflective functioning capacity.
- Improvements have been noted in parental behaviours associated with sensitive parenting.
- A reduction has been noted in parental behaviours identified as controlling and unresponsive.
- Parents have moved from clinical categories of risk or ineptness regarding their relationship with their baby to adequate and sensitive categories.
- Parental perceptions of stress related to parenting increased across the period.
- Parental levels of anxiety decreased across the antenatal component of the programme and were then seen to increase following infant delivery.

In addition, a number of other draft findings were noted:

- Parents described the Peep Reflective Parenting Programme as enjoyable, informative and non-stigmatising.
- Parents requested more detailed information about infant development including neurobiology and attachment.
- Parents requested additional practical examples of activities, rhymes and techniques that they could practice with their ‘bumps’ and newborns in order to maximise the development of a positive attachment bond.
- Recruitment to the pilot through midwifery links proved problematic in practice. Referral routes need to be clearly established and implemented.

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