

Adapting and developing a video-feedback intervention for co-parents of infants at risk of externalising behaviour problems (VIPP-Co): A feasibility study

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Abstract

Background: Recent research on early-interventions with parents of infants at risk of externalising behaviour problems indicates that focusing on co-parenting and involving fathers in treatment may enhance effectiveness. This paper reports the development and preliminary evaluation of a brief intervention: Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline for co-parents (VIPP-Co).

Methods: Families who reported to be struggling with their infant's behaviour were recruited from the community and received six home-based sessions of VIPP-Co. The primary outcome was feasibility of the adapted intervention, assessed using semi-structured questionnaires and interviews post-intervention. Preliminary clinical outcome measures were also recorded.

Results: Five families with infants between 10-24 months completed the intervention. Feedback data documented high rates of acceptability and feasibility. All fathers and mothers completing the intervention reported that it positively impacted on their understanding of their child's thoughts and feelings, as well as their approach to individual parenting and co-parenting. Additional preliminary outcome data indicated positive changes in parent-child interaction and a positive trend was found for infant behaviour, parental wellbeing, and parent relationship adjustment across the intervention.

Conclusions: The overall results of this study are encouraging, but VIPP-Co must be evaluated with larger samples to explore its efficacy.

Keywords

Video, early-intervention, externalising behaviour, co-parenting, feasibility.

Introduction

‘Externalising behaviour’ is a construct used in developmental psychopathology literature that refers to a child’s outward behaviour of non-compliance, physical aggression, disruptiveness, and hyperactivity (Achenbach & Edelbrock, 1978). Children who display more frequent or severe externalising behaviours (compared to same-aged peers) may be considered to have externalising behaviour problems (EBP; Burke, Loeber, Birmaher, 2002). If left untreated, up to 40% of infants who display early externalising behaviours go on to develop enduring EBPs (Coid, 2003; Petitclerc & Tremblay, 2009), a pattern which can be detected from as early as 10 months¹ (Alink et al., 2006; van Zeijl et al., 2006a). In the United Kingdom (UK) EBPs form the majority of the burden of psychiatric morbidity in early childhood, with 5-10% of children between 2-5 years meeting diagnostic criteria (Scott, 2007). These difficulties can lead to detrimental longer-term outcomes for the child and their family, as well as society as a whole, with EBPs incurring considerable costs to health, social care, education and criminal justice systems (Smith & Smith, 2010).

Difficulties in providing *sensitive* parent-child interactions and a lack of secure attachment relationships (particularly disorganised attachment relationships) are important risk factors for the later development of EBPs

¹ The authors are aware that labeling infants as young as 10-months as having EBPs can be problematic and where possible this will be avoided, and used only in reference to older offspring. Young infants will be described as being “at-risk” of EBPs when they are displaying comparatively high levels of externalising behaviours.

(Petitclerc & Tremblay, 2009; Fearon et al., 2010). These risk factors are moderated and co-exist with other important risk factors, such as poverty and other social risks, but such findings have thrown the spotlight on the opportunity parenting programmes provide for intervening early and altering the trajectory of child development. Consequently, numerous preventative early-treatments have been developed that promote secure attachment through enhancing parental sensitivity and discipline (e.g. Bakermans-Kranenburg, Van IJzendoorn, & Juffer, 2003). One such programme with a particularly strong evidence-base is the video-feedback approach (Bakermans-Kranenburg et al., 2003; Fukkink, 2008). The 'Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline' (VIPP-SD; Juffer, Bakermans-Kranenburg, & van IJzendoorn, 2008) is one such intervention that has been found to have high levels of acceptability and effectiveness in improving maternal sensitivity and positive discipline strategies (van Zeijl et al., 2006b). Initial work has been undertaken to successfully adapt this intervention for use with a range of populations (Juffer et al., 2009; Schoemaker et al., in press), including new fathers (Lawrence et al., 2013).

VIPP-SD uses video-feedback in a strengths-based paradigm to increase parents' observational skills, their knowledge and awareness of the development of their child, their capacity to empathise with their child, as well as

their ability to use sensitive responses and discipline when interacting with their child. The approach was developed to work with parents of infants at risk of enduring behavioural problems, and as such has been inspired by two main theoretical frameworks: attachment and coercion theories. Although they have very different theoretical bases, attachment and coercion theory both emphasise the importance of non-aversive interactions and attunement of parental responses to their child's behaviours (Ainsworth, Bell & Stayton, 1974; Patterson, 1982). VIPP-SD focuses on improving attachment quality in parent-infant relationships by directly targeting parental sensitivity: the parent's ability to accurately perceive their infant's attachment signals and respond to them adequately and appropriately (Ainsworth et al., 1974). To improve sensitive discipline, the programme uses the principles of coercion theory. Coercion theory asserts that aversive infant behaviours and EBPs develop and are reinforced through ineffective and inconsistent parental discipline (Patterson, 1982), whereas sensitive discipline and consistent boundary-setting are associated with decreases in EPBs (Lieberman, 2004).

The majority of early interventions to-date have focused on the mother-infant relationship. In this intervention we expand the focus of intervention in two key ways. First, by the engagement and involvement of fathers in the intervention, and second, by attempting to work with parents together within

some of the intervention sessions, explicitly working with them as co-parents of the index child. A growing body of literature suggests that fathers also make a significant contribution to children's early lives. This may be particularly important for some areas of development, such as behavioural development (Lamb, 2004; Ramchandani et al., 2013). It is therefore important to look beyond the mother-infant relationship and consider the influence of other significant relationships and interactions within the family environment. Children form attachment bonds with more than one carer or significant other, and encouraging sensitive responding in both mothers and fathers is likely to lead to higher rates of secure attachment relationships with both parents. Within the frame of social learning theory, it also makes sense to have parents responding to their children in a relatively consistent manner, particularly when it comes to their behaviour. Thus providing the ViPP-SD intervention to both parents is likely to have additional benefits for child outcomes over the involvement of one parent – although careful consideration must also be given to testing for adverse outcomes, such as dilution effects (Bakermans Kranenburg et al, 2003).

In this intervention we have moved a further step beyond engaging mothers and fathers separately to engage parents together in some sessions. There has been an increased focus on interactions between both parents and

their infant (triadic interactions) (Doherty & Beaton, 2003). Research indicates that the quality of co-parenting (i.e. the degree of conflict or competitive dynamic) may impact on the development of the infant, with both poor co-parenting and high relationship discord being associated with adverse psychological adjustment for the offspring, including EBPs (Minuchin, 1974; Teubert & Pinquart, 2010). By working with both parents in this way we are bringing in insights from systemic theory (whereby parents can better support and interact with each other, so improving the overall interactions with their child), but also drawing further on insights from social learning theory, where parents can together establish consistent and more positive ways of responding to difficult behaviour or challenging situations with their young child. As such, this study aims to integrate the co-parenting literature with social learning and attachment theories to adapt and develop a VIPP-SD programme for use with co-parents.

To our knowledge there have not been any early-interventions focusing on EBPs in young children, using video-feedback with a co-parenting theme. As the Video-feedback Intervention for Positive Parenting and Sensitive Discipline for Co-parents (VIPP-Co) is a new adaptation of VIPP-SD, the process of its development is set within the Medical Research Council's (MRC; 2008) guidance on *Developing and evaluating complex interventions* (Craig et al.,

2008). We were primarily concerned with the initial stages of this process: describing the evidence-base and theory behind the defined intervention components, and making a preliminary assessment of its feasibility to garner essential information before efficacy can be evaluated in an RCT. Our aims were to therefore address the following factors and related research questions:

(a) **Recruitment and Retention.** How easy was it to recruit participants? What was the rate of participation and attrition? Were there any reasons or participant characteristics associated with drop-out?

(b) **Acceptability.** What were mothers' and fathers' individual and joint experiences of the intervention? What clinical or practical concerns arose from implementing the intervention?

(c) **Preliminary Outcomes.** Within the context of a small-scale study, what is the evidence that VIPP-Co is effective in improving clinical outcomes?

Methods

Recruitment

Participants were recruited via poster advertisements across community health and social care settings such as health-visitor clinics and children centres, as well as via social media and relevant online websites, such as 'Netmums' and 'Mumsnet'. The adverts invited parents to contact the research team if they

wanted any help managing their infant's behaviours. Families were excluded from taking part if: either of the parents were under 18 years of age; the infant had a significant illness/disability (that would be likely to influence developmental assessments); a parent had a diagnosis of a learning disability; a parent had a substance misuse disorder that prevented them completing sober intervention appointments; a parent being acutely psychotic; insufficient English to understand assessments; and if the parents were not the primary caregivers to the infant.

Initially, families were recruited if they verbally reported infant challenging behaviour and reported subclinical levels of externalising problems on the Child Behavior Checklist (CBCL/1½ -5; Achenbach & Rescorla, 2000). This approach was conducted with the initial aim of adapting the intervention for use with both mothers and fathers. However, as VIPP-Co was developed to target infants displaying or at risk of developing EBPs, families reporting clinically significant levels of EBPs on the CBCL were subsequently also included in the study (>13 on the CBCL externalising behaviour problems subscale, van Zeijl et al., 2006b).

In total, 30 families contacted the research team interested in taking part. Of these, eleven agreed to take part, and six met the study's inclusion criteria. A phased approach to the study was used. Initially, intact but non-clinical families

with both mothers and fathers were recruited ($N=2$), and then clinical families ($N=4$). It was decided to include one family in the study where the couple were intact but the father did not want to take part for the purpose of testing the feasibility of the intervention, including the co-parenting themes, with an individual parent.

Participants

The mean age of mothers was 35 years ($SD=4.3$, Range=30-43) fathers 36 years ($SD=5.1$, Range=30-45), and infants 16 months ($SD=3.4$, Range=11-20). Two male infants and four female infants were included in the study (see Table 2). One family (C) dropped out of the study after the initial assessment.

Procedure

Prior to commencing the study, ethical approval was obtained from the regional committee for Medical Research Ethics as well as local NHS R&D approval. Written consent was sought from all participants.

The content and themes of the intervention broadly mirrored those described in the VIPP-SD manual (Mesman et al., 2008; see Table 1 for further detail). However to reflect its delivery with co-parents, a draft treatment manual was developed to reflect the additional emphasis on triadic interactions (both

parents together with the child) and positive co-parenting. Two additional messages were included in the feedback delivered in VIPP-Co: (1) working together as a couple and supporting each other (including consistency in discipline and discussing differences of opinion away from the infant) and (2) having fun together as a family.

The families received an initial one hour home-based, pre-intervention visit. During the visit, the parents and infants completed the baseline questionnaire measures and several filmed tasks. Following this, the intervention was delivered by a clinical psychologist across four to six home-based sessions. Parent-child interactions were recorded to provide feedback on infant attachment signals and behaviours, parenting and discipline strategies, and general information on infant development. Parents were recorded interacting with their infant in everyday situations, e.g. mealtimes, playing together, tidying up and reading. In the development of VIPP-Co, the scenarios remained largely the same as those included in VIPP-SD, with some additional triadic tasks and games included, such as playing together with a ball and building a tower together. Feedback was prepared in between sessions and provided using a strengths-based approach in the subsequent session depending on its theme and focus (see Table 1). One adaptation to the original VIPP-SD intervention was the way in which feedback was provided to the

families. Feedback was initially provided separately for mothers and fathers, and from session four onwards they were invited to have joint feedback.

All the parents received a file with still-photos from their video-clips and information on the key parenting issues discussed during the home visits. They also received a DVD of all the video clips that had been recorded. Participants received a £25 gift voucher following each of the two assessment sessions.

The first four VIPP-Co sessions occurred approximately fortnightly and lasted around 90 minutes. The final two top-up sessions occurred approximately every four weeks, lasting 60-90 minutes. The mean length of the intervention was twenty weeks ($SD = 9.3$; Range=11-33). Feedback questionnaires were completed by each of the parents after each of the individual sessions to assess acceptability. The post-intervention visit procedures were identical to those at pre-intervention, with the addition of a brief feedback interview, which took an average of 25 minutes ($SD=7.8$; Range=19-42).

Instruments

Psychometric questionnaires

Externalising behaviours. The Child Behavior Checklist (CBCL/1½-5; Achenbach & Rescorla, 2000) was used to assess infant externalising

behaviours, completed by either parent. The CBCL asks parents or caregivers to rate 99 child behaviours (i.e. destroys his/her own things; hits others; and angry moods). Total Problem Scores range from 0 to 200, with a clinical cut-off of >59 (Achenbach & Rescorla, 2000). Cronbach alphas have been found to be high (Kristensen et al., 2010).

Parental Wellbeing. The General Health Questionnaire (GHQ-12; Goldberg & Williams, 2000) is twelve item questionnaire that was used to measure overall psychological wellbeing. Total scores range from 0 to 36. Using the Likert method of scoring, the GHQ-12 has been found to highly reliable, with an alpha coefficient of .90 (Hankins, 2008).

Parental Couple Relationship. The Dyadic Adjustment Scale (DAS; Spanier, 1976) is a thirty two item questionnaire developed to evaluate the relationship quality of married and cohabiting couples. A total DAS score is obtained by summing all items of the questionnaire, with scores ranging from 0 to 151, with higher scores indicating higher levels of relationship adjustment. High levels of internal consistency (Cronbach's alpha) were found by the original authors for both men and women: .89 and .87 respectively

Observational coding

Quality of parent-infant interactions. An adapted version of the Global Rating Scales (GRS; Murray, Fiori-Cowley, Hooper, & Cooper, 1996) was used to assess the quality of video-recorded parent-infant interactions. The original GRS was developed to capture parent-infant interaction in the first three-months postnatally, and it has been subsequently adapted to take into account the greater range of behaviours of older infants, such as those included in this study (Zioga Hadjianastassiou, 2012) and also mother- and father-child interactions (Madden et al., 2015).

As part of the assessment in the current study, mothers and fathers were filmed separately completing a five-minute free play task with their child. Each parent was provided with a range of toys and puzzles, and guided to play with their child as they usually would. The interaction was rated for sensitivity, warmth, reciprocity/synchronicity and engagement. All codes were rated on a 5-point ordinal scale. Reliability was established using weighted Kappa (Cohen, 1968), with an average Kappa value of .83 (Range=.74-0.91; $n=13$).

Parental discipline. Parental discipline strategies were observed during a two minute 'don't touch task'. Each parent was provided with a bag of novel toys and instructed to get them out in front of the child but to refrain from allowing

the child to play with the toys until the task had elapsed. The parent was guided to interact with their child as they usually would but not to use other toys that may be available in the room during the two minutes. Discipline was coded according to a scheme that was developed to capture both positive (i.e. distraction or praise) and negative discipline strategies (i.e. shouting or conflicting messages) in an event count structure, based on previous validated measures and the targeted strategies included in VIPP-SD (Kuczynski, Kochanska, Radke-Yarrow, & Girnius-Brown, 1987; Van Zeijl et al., 2006b).

The adapted GRS were also used to code for child compliance and parent-infant agreement, and parental sensitivity and warmth; again chosen for their prominence and relevance in the literature. All codes were rated on a five-point ordinal scale, and the mean measure of reliability was found to be .90 (range=.75-1.00; $N=13$).

Feedback measures

The acceptability of VIPP-Co was assessed by asking parents to provide detailed feedback about the intervention. This was obtained using self-report questionnaires and interviews. The questionnaires explored participant satisfaction and experience of VIPP-Co's helpfulness, enjoyableness, relevance, and format. Each parent filled out a nine-item feedback

questionnaire after each session. At the post-intervention assessment session, parents completed another general fifteen-item feedback questionnaire and interview. The interview was designed to obtain a more qualitative and detailed perspective of their experiences of the intervention, particularly focusing on their feelings about the video-feedback component, their experience of the couple-element of the intervention, any identified problems, suggestions for alterations and general reflections.

Data analysis

For the purpose of analysis, the open-ended questions in the feedback questionnaires and the transcribed feedback interviews were treated as one data-set. Qualitative analysis was conducted based on guidelines for Thematic Analysis detailed by Braun and Clarke (2006). Initially all thoughts, ideas and possible themes were noted down during transcription (Riessman, 1993). The data was then read and re-read several times to ensure data immersion (Braun & Clarke, 2006) and codes were then identified based on what might be pertinent to the original research questions which sought to explore families' experiences of VIPP-Co's helpfulness, relevance, format, and satisfaction in taking part. Using thematic maps, the codes were combined to form overarching themes, which were then refined, defined and named (Braun & Clarke,

2006). Two methods were used to establish inter-coder reliability. Firstly, an additional coder conducted double-coding of a sample of the transcripts, and secondly any discrepancies were then discussed and resolved as a wider team.

As this was a feasibility study the primary objective was not to achieve statistical power for hypothesis testing. However, clinical improvement data were considered a useful and informative secondary outcome. Group descriptive statistics were reported for each of the measures to compare any change across the intervention.

Results

The results will be presented in sequential order of our original aims:

a. Recruitment and retention.

Recruitment was a challenging aspect of the intervention. Despite a multi-method recruitment drive, only 30 parents contacted the research team reporting an interest in taking part between August 2013 and March 2014. 7 families (23%) were determined to be ineligible. Of the remaining 23 eligible families, 17 (57%) declined participation. Reasons for this included: no longer being interested in the study ($n=10$), not having enough time ($n=4$), plans to move away from the area ($n=2$), and physical health problems ($n=1$). The final

sample of 6 families represented a participation rate of 20% and a response rate of 26%. Data are presented pictorially in a flow diagram in Figure 1.

One family dropped out of the intervention following the pre-assessment visit, as they were 'uneasy' about completing the DAS (Spanier, 1979). All other families reported that the assessment measures took an acceptable amount of time to complete, and reported finding their content to be appropriate and relevant.

b. Intervention acceptability.

Data from the feedback questionnaires indicated that VIPP-Co was generally viewed positively, with the flexibility to conduct sessions at home and at evenings or weekends being highlighted as fundamental to successful delivery. However, due to this flexible approach to scheduling, a common reflection from parents was that scheduling could be challenging and sessions were not held as frequently as they would have liked. There was also some feedback regarding the sessions being too long at times (Tables 3).

Parents provided positive feedback on the helpfulness of the intervention and the extent to which they had developed new understanding of their relationship and communication with their infants, as well as more understanding about their thoughts and feelings (Figure 2). The Thematic

Analysis of the interview transcripts and open-ended questionnaire responses revealed 8 main themes: 'Getting dads involved', 'Getting it right', 'Being in the spotlight', 'Understanding my child', 'Putting it into practice', 'Parenting together', 'Let's get real', and 'Making it work practically'. Much of the constructive feedback reflected that quantified in the questionnaires. However additional information was gathered on how much parents valued the strength-based model of the programme, and how this provided reassurance and allowed them to develop new ways to relate to their babies, and reflect on new parenting approaches. These are described in Table 4, along with quotations relating to each of the themes.

c. Preliminary Outcomes.

As discussed, due to the small pilot sample size, quantitative outcomes were conducted to explore the possible trends in the data, not to test statistical significance. Outcome data was derived from the CBCL Externalising scores and Total Problems scores, as well as the DAS and GHQ-12. Mean group scores were reported for a comparison across pre- and post-intervention, of which there was a global trend of improvement across all measures (Table 5). Additionally there was a global pattern of improvement on the observational coding of parent-infant interaction-quality and sensitive discipline (Table 6).

Discussion

To our knowledge, this was the first feasibility pilot of a VIPP intervention that focused on co-parenting and included both mothers and fathers. The findings detailed in this report suggest that with some additional minor adaptations VIPP-Co is a feasible and acceptable intervention to parents of young children. In terms of the potential for clinical effectiveness, the intervention showed promise in possibly reducing parent report of infant externalising behaviour, improving the observed quality of parent-infant interactions, and improving maternal mood. First, the feasibility and preliminary outcomes will be discussed and interpreted, then the main strengths and limitations of this study will be considered, followed by suggestions for future research and clinical work in this area, finishing with some overall conclusions.

Recruitment and retention

Recruiting and retaining participants in a treatment study is critical. However, recruitment in this study was challenging, with a response rate of 26% and participation rate of 20%. It was not possible to explore the possibility of a non-response bias, as basic characteristics and demographics between the non-responders and responders were not collected. However, reasons for non-

participation were recorded (no longer being interested in the study, not having enough time, planning to move away from the area, physical health problems). Not having a partner willing to participate was a further reason for exclusion; a challenge also highlighted in the Thematic Analysis, and in line with previous research on father participation in parenting interventions (Raikes, Summers, & Roggman, 2005). One of the key barriers to father engagement reported in the literature is fathers feeling that they would not find 'traditional' parenting classes (developed for mothers) helpful and useful (Lee, Yelick, Brisebois, & Banks, 2011). In the Lee et al. study, fathers reported that they would be more interested in taking part in an intervention that made clear on its advertising that it had been designed for fathers and is facilitated (in part) by other men, preferably who are also fathers. Additionally they reported a preference for more community- and activity-based intervention tasks and the use of technology to complete sessional measures. The barriers to recruitment in this study together with the background literature provide information that could be integrated into subsequent VIPP-Co recruitment.

Only one family dropped out of the study and this was prior to the intervention.

Intervention acceptability

The overall feedback from both the co-parents and the individual mother was that VIPP-Co was viewed positively, with parents reporting an improvement in their understanding and parenting approach, both individually and as co-parents. This supported the integration of attachment and social learning theories in a systemic framework as possible mechanisms for this underlying change. Parents valued the option of the sessions being conducted at weekends in their own home, as well as the reassuring positive encouragement of the intervention ethos.

Some of the less helpful aspects of the intervention raised by parents included the length and infrequency of sessions. This may have been due to the small-scale nature of the study, with all the families receiving the intervention by just one psychologist. This is therefore an aspect of delivery that could be rectified if delivered on a larger-scale. Some of the other constructive feedback was around some of the tasks not feeling naturalistic to families' day-to-day interactions, and therefore some arenas of challenging behaviour, such as around bedtime routine, were not elicited in the intervention.

Preliminary outcomes

The preliminary outcomes were encouraging, in that there was a global trend of improvement across all measures (child behaviour, parental mood, parental

relationship, parental sensitivity and sensitive discipline) found across treatment; with the most notable improvement being the parent-reported CBCL Total Problems score. This difference may reflect an objective impact on child behaviour as a result of parents having adapted their parenting styles (Fearon et al., 2010), but it is also possible that it reflects a change in how parents perceive their children when they have more knowledge and understanding of child development and behaviours.

Although based on small numbers the initial results from the observational measures are also interesting and reflected the trend found in previous VIPP research (Van Zeijl et al., 2006b).

Study Limitations

This study has several limitations. This was a feasibility study with a small sample size based on establishing feasibility, which precluded use of any inferential statistics. Therefore only the most conservative interpretation of these results is possible. Although it is inferred that VIPP-Co was beneficial from the qualitative report and some of the preliminary outcomes, it is possible that improvement was a reflection of natural recovery or related to one or a number of unmeasured factors. Furthermore no longer-term follow-up measures were obtained post the final assessment, and this may have been useful to ascertain

the longevity of any changes in parent-child interaction as well as other outcomes such as CBCL ratings.

When considering the make-up of the participant group, there was some variation in ethnic backgrounds and employment status, but this was limited. The age range of the parents in the study was between 30 -45, with a mean age of 35 and 36 for mothers and fathers respectively. Additionally, with the exception of one family all families were first-time parents.

A further limitation of this study was that one author (CR) scored all the questionnaires and coded all the video interactions for both mothers and fathers, as well as conducting the final feedback interview, which may have had a biasing effect. Furthermore, a single therapist (JI) conducted the intervention with all the participants, and it is a possibility that therapist-specific factors may have contributed to any changes found across treatment as a result. None of the participants reported receiving any other concurrent therapeutic, medical or social input with their parenting.

Research and clinical implications

The logical next step in research is to conduct a full-scale single-blinded RCT of VIPP-Co with families of infants with high levels of externalising behaviours. Participant feedback and suggested adaptations reported in this study are likely

to be valuable in further development of the intervention. These include the following:

- a) developing a schedule collaboratively with each family at the pre-intervention assessment to ensure that the intervention is delivered in a timely fashion;
- b) including triadic interactions at an earlier point in the intervention, possible from session 2;
- c) asking parents whether they would like their feedback separately or together to overcome any issues of feeling exposed in front of their partner, whilst emphasising the benefits of shared feedback in enforcing co-parenting messages and being a practical use of time;
- d) inviting families to suggest situations in which they are struggling with their infant's behaviour in order to film and provide feedback on such a scenario;
- e) including an intervention theme on sleep and bedtime routine; and
- f) considering including only one parent in treatment when it is clear that co-parenting messages may be beneficial and generalisable outside of the treatment paradigm.

VIPP-Co is a treatment model that values a number of overlooked areas within parenting interventions that are available in the current health and social care provision: systemic family triadic interactions and co-parenting (Teubert & Pinquart, 2010); the unique contribution of father-infant interactions (Lamb, 2004); developing sensitive parent-infant interactions and sensitive discipline strategies (Ainsworth et al., 1974; Patterson, 1982); and prevention of long-term enduring difficulties through early-intervention (Bakermans-Kranenburg et al., 2003). This study found that the integration of this specific series of factors was deliverable and acceptable in a feasibility paradigm, which is very encouraging for clinical practice. When planning pragmatically for its clinical application in UK health and social care systems, it is worth considering the intervention's impact in terms of healthcare costs (MRC, 2008). As VIPP-Co is based on a prevention model, it has the potential to contribute to reducing the huge cost of EBPs not only on the healthcare system but on the social care and criminal justice system too (Smith & Smith, 2010). However this would need to be ascertained formally in a full economic analysis. There is growing evidence that front-line staff (e.g.. health-visitors) are able to provide psychological treatment clinically and cost-effectively when trained and supervised by psychologists (Morrell et al., 2009). To maintain economic feasibility in an under-resourced healthcare system, this

may be a useful pragmatic model of delivery for VIPP-Co, though it is important to first formally evaluate its efficacy.

Conclusion

The newly adapted VIPP-Co intervention program, based on attachment, social learning and family systems theory, showed encouraging preliminary outcomes with positive qualitative feedback in terms of participant acceptability.

Recruitment was challenging and the flexibility to conduct sessions at home at evenings or weekends was identified as fundamental to successful delivery.

With a number of minor amendments to recruitment, session scheduling and length, VIPP-Co should be administered with a larger clinical sample in an RCT paradigm to evaluate its efficacy with co-parents.

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Table 1. A summary of Video-feedback to promote Positive Parenting and Sensitive Discipline

Ethos	To encourage parenting in a positive atmosphere through positioning parents as the experts with their own infants.		
Structure	– 6 sessions of 90-minutes at the family's home over 16-weeks. – Each session starts with video-taping a parent-child interaction, followed by watching recordings of the previous visit for 'feedback'. – During feedback the therapist provides "subtitles" for the behaviour of the child in the videos to encourage "speaking for the child"		
Themes	<i>Session</i>	<i>Sensitivity theme</i>	<i>Discipline theme</i>
	1	Exploration & attachment	Induction and distraction
	2	'Speaking for the child'	Positive reinforcement
	3	'Sensitivity chain'	Sensitive time-out
	4	Sharing emotions	Empathy for the child
	5-6	Review and practice the key messages	Review and practice the key messages

Table 2. Participants' socio-demographic information

Participant	Family	Age	Index infant (sex, age)	Employment status	Ethnicity
1 Mother	A	33	Girl, 18 months	Employed, part-time	White, African
2 Father	A	36		Employed, full-time	White, African
3 Mother	B	35	Girl, 13 months	Employed, part-time	White, British
4 Father	B	33		Employed, full-time	White, British
5 Mother	C	43	Girl, 17 months	Employed, part-time	White, British
6 Father	C	45		Employed, full-time	White, British
7 Mother	D	35	Boy, 11 months	Employed, part-time	White, British
8 Father	D	35		Employed, full-time	White, British
9 Mother	E	35	Boy, 20 months	Employed, part-time	White, British
10 Father	E	30		Employed, part-time	Mixed, British
11 Mother	F	30	Girl, 18 months	Full-time mother	Mixed, European

Table 3. Parent acceptability questionnaire (*n*=9)

Items from questionnaire		<i>n</i> (%)
Difficulty of scheduling intervention sessions	Very easy	3 (33)
	Easy	2 (22)
	Neither difficult or easy	1 (11)
	Somewhat difficult	3 (33)
Helpfulness of delivering in home-environment	Very helpful	5 (56)
	Helpful	4 (11)
Ability to take part if in clinic or hospital	No	7 (78)
	Yes but only some	2 (22)
Acceptability of session frequency	About right	6 (67)
	Not frequent enough	3 (33)
Acceptability of number of sessions	About right	8 (89)
	Too many	1 (11)

Table 4. Intervention themes based on participant feedback

Theme	Quotation
<i>Getting dads involved</i> This theme describes the process of accessing and engaging men in the study, and some of the barriers to taking part.	“...it must be challenging to get dads involved in things like this as it is a cultural thing with mums taking a lead.” “My concern was the filming of our daughter really, and what was going to happen to that...like will you have it on facebook or anything like that?”
<i>Getting it right</i> This theme describes the experience described by parents of receiving the positive feedback.	“I think as a parent there is often the feeling that you are doing it wrong or there is a better way of doing it. So it’s nice to have a friendly person come to your house, look over a video, tell you things that are going well.”
<i>Being in the spotlight</i> This theme refers to parents’ experience of being filmed, and watching the films back.	“What I think is good is that the more you see the videos back the more you appreciate it’s not about you being filmed, it’s more about watching [infant’s name] and his reactions about things.”
<i>Understanding my child</i> This theme describes any changes parents experienced in their understanding of their infants.	“...it just seemed like she was a baby who sleeps and drinks and now I can notice that she is more responsive and fun...noticing that all of a sudden she starts to become a little person”.
<i>Putting it into practice</i> This theme is concerned with the changes parents experienced in their approach to parenting, discipline and interacting with their child outside of sessions.	“My behaviour has changed in playing with her, to want to play with her, to be gentle, to bring out the toys and take them away calmly. I really learnt a lot.” “...she was quite naughty after swimming...so I tried to distract...and not dwell on the things she was doing before. That’s hard and that’s what the study reminded me to do.”
<i>Parenting together</i> This theme concerns the parents’ experiences of taking part in a co-parenting intervention.	“We do the thing with the ball now where we all sit on the floor and [infant’s name] decides who to throw it to...we don’t usually all play together...so that was new...”
<i>Let’s get real</i> This theme described how well parents felt the tasks and activities generalised from the intervention into their day-to-day family life.	“It might have been useful to catch [infant’s name] displaying more challenging behaviour that could be talked through in future feedback in terms of parenting approaches. For example, she struggles to brush her teeth and go to bed and it would have been great if you could have filmed those times.”
<i>Making it work practically</i> This theme concerns parents’ experiences of the practical delivery of the intervention.	“It would have been impossible for us both to take part unless it was offered at the weekend.”

Table 5. Group mean scores at pre- and post-intervention and percentage of reliable change

Measure	Pre-treatment mean (SD)	Post-treatment mean (SD)
<i>Infants</i>		
CBCL Total Problems	33.3 (22.5)	24.6 (20.4)
CBCL Externalising	11.8 (9.9)	10.6 (10.4)
Attention problems	3.3 (3.2)	2.6 (3.1)
Aggressive problems	8.5 (7.2)	8.0 (7.3)
<i>Fathers</i>		
GHQ-12	8.3 (3.3)	8.3 (3.1)
DAS total score	119.8 (11.0)	122.8 (14.7)
<i>Mothers</i>		
GHQ-12	10.4 (3.9)	7 (1.7)
DAS total score	125.5 (13.0)	124.8 (9.2)

Note. A decrease in score indicates an improvement, with the exception of DAS, for which an increased score indicates improvement.

CBCL: Child Behaviour checklist; DAS: Dyadic Adjustment Scale; GHQ: General Health Questionnaire; SD: Standard deviation.

Table 6. Group mean scores based on observational coding at pre- and post-intervention

Measure	Pre-treatment mean (SD)	Post-treatment mean (SD)
5-minute free play task		
<i>Fathers</i>		
Sensitivity*	4.0 (.8)	4.2 (.8)
Reciprocity	3.8 (1.0)	4.0 (.7)
Warmth	3.5 (1.0)	4.2 (.8)
Engagement	4.0 (.8)	4.2 (.8)
<i>Mothers</i>		
Sensitivity	4.0 (1.2)	4.2 (.8)
Reciprocity	3.4 (.9)	4.0 (.7)
Warmth	4.0 (.7)	4.2 (.8)
Engagement	4.6 (.5)	4.2 (.8)
2-minute do not touch task		
<i>Fathers</i>		
Sensitivity	3.8 (1.3)	4.0 (0)
Warmth	4.0 (.8)	4.5 (.6)
Positive discipline strategies	4.8 (2.5)	4.8 (1.3)
Negative discipline strategies	5.3 (6.7)	2.0 (1.4)
Child compliance	3.0 (.8)	4.0 (.8)
Agreement	3.8 (1.5)	4.8 (.5)
<i>Mothers</i>		
Sensitivity	3.4 (.9)	4.4 (.5)
Warmth	3.8 (1.1)	4.2 (.4)
Positive discipline strategies	4.6 (3.1)	5.8 (2.2)
Negative discipline strategies	3.2 (2.9)	2.2 (1.5)
Child compliance	2.6 (.9)	3.6 (1.1)
Agreement	2.8 (1.3)	4.0 (.7)

Note. *An increase in score indicates an improvement, with the exception of **negative discipline strategies**, for which a decreased score indicates improvement.