

# Through each other's eyes: using first person perspective footage to enhance video feedback methods for parents and babies

In our original ERC funded MHINT proposal, we hypothesised that a key causal ingredient in the success of parenting interventions is video feedback in the context of positive parenting and sensitive discipline.

The effectiveness of such an approach compared to other parenting interventions (such as psycho-education or home visiting) is being established in our review and component meta-analyses. We have identified a number of studies using this approach based on a model first proposed by Juffer, Bakermans-Kranenburg and van IJzendoorn (2012).

However, a further aim of MHINT is to use our developments in video capture to enhance video methods *both* as a research tool and a potential therapeutic tool. The video feedback therapeutic approach consists of video feedback intervention sessions. Parents are recorded by a third party interacting with their infants in a naturalistic free- or structured-play session. These recordings are then discussed at a future session with a trained professional, who will have carefully selected strength-based moments to show the parent.

Strength-based moments include moments that highlight the sensitive,

responsive, nurturing and competent behaviour of the mother/caregiver. This could be turning the attention to the child's vocalisation, a smile, a caring and gentle touch etc. The focus should be on something the therapist wants to reinforce, not on something that should be 'corrected'. Parents are then supported in observing their own behaviours and their child's responses, thereby improving their observational skills, awareness and empathy.

The wearable 'headcam' technology developed in MHINT could provide an advancement that could facilitate video-feedback aims. A key goal of

## Feedback of multi-perspective video data of parent-child interactions; opportunities and uncertainties



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## What to record?

### Routine activities

- Ask parents about a 'day in their life'
- What emotions do parents expect in routine interactions?
- What routine challenges do parents face?

### Free and structured Play

- What games do they play?
- What type of toys do they play with together or alone?
- What emotions do they expect in play?

### Challenges and distractions

- What are the interactions of emotions/behaviours parents find hard?
- What external sources/distractions are hard to manage?

## What footage to select?

### Individual goals

- Show moments that encourage self-efficacy linked to goals.
- What do parents see as successful interactions?
- How to show less optimal interactions/ challenges that parents want help with?

### Behaviour change targets

- Moments that show mutual attention-position.
- Synchronicity.
- Pauses to allow exploration.
- Positive moments that elicit emotional engagement with films.

### Automated selection?

- Automated processing could highlight points of change detect gaze/smiles/posture?
- Can this be used to identify peak interactions?
- How would this be viewed as compared to therapist selection?

## How to present footage?

### Still shots or film

- What do parents notice in a still picture or selection of stills?
- What do they notice in film clips that they don't in stills or vice versa?
- How do they feel when looking at stills or videos/films?

### What behaviours in interactions?

- What interactions would parents like to see ?
- How do they feel watching playing, smiling, watching joint gaze etc...
- How do they feel watching different scenarios
- What do they notice in each behaviour example.

### Which film angle to use?

- What do parents notice in each perspective ?
- How do they feel watching each?
- What unique information is there in each ?
- What do they notice with the combination of perspectives?



video feedback is to act as reflection and speak for the baby, which involves the mother seeing the world from her baby's viewpoint and thus responding to the baby's emotional needs.

The video capture method, developed as part of MHINT, records from the first-person viewpoint. We hypothesise that reviewing headcam footage in an interventional context could facilitate mothers' ability to see their interactions through their babies' eyes and re-live the interaction through their own eyes, encouraging observational skills and empathy for the child. This, in turn, may improve the parent's reflective ability to think about the child's and their own emotional needs.

However, this is currently only a hypothesis, and it is essential to incorporate the voices of those with lived experiences to identify opportunities and challenges with this approach. To reach this goal, we propose to conduct a 'live lab' exhibition to learn from families themselves and co-create protocols for development (Figure 1). We will initially present our previous footage (Figure 2) and live collected footage collected on the day from individual families. In parallel, as part of the Play Study we plan to pilot this approach in South Africa.

In the case examples in Figure 1, each perspective provides unique information. For example, the mums' view shows the babies' expression much more clearly and may allow the mother to re-live that moment. Seeing the baby's view allows the mother to see herself and her expression as her baby saw them or what the baby was looking at (as in the example where the baby is viewing up close the red box). The third-person perspective shows body postures and the context, so it is also essential to contextualise the first-person perspective. We also need to consider the potential disadvantages of using a first-person perspective. For example, because of its increased immersiveness, it may facilitate a feeling of empathy, change of perspective, or thinking for the baby, but it also may evoke a more intense emotional response.

In our protocol, we will record the family watching the footage to view emotional reactions to each perspective.



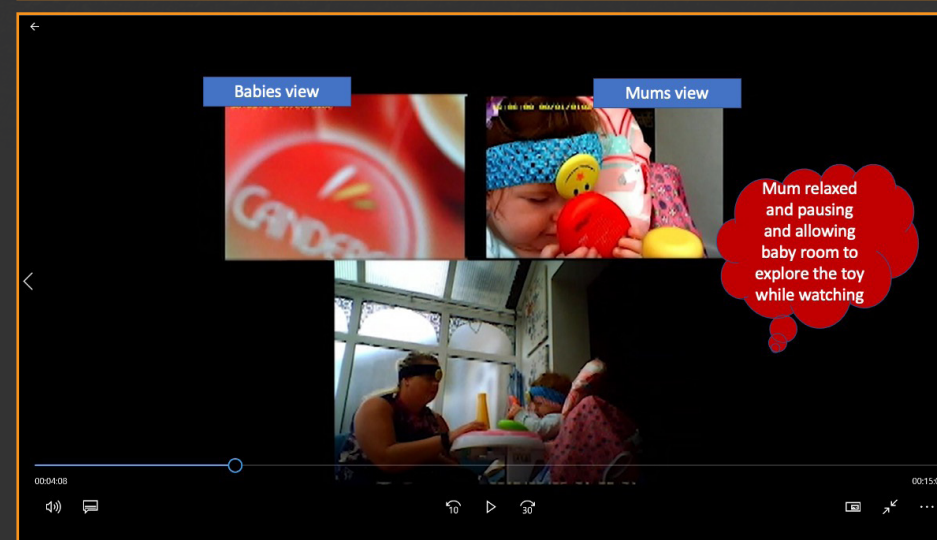
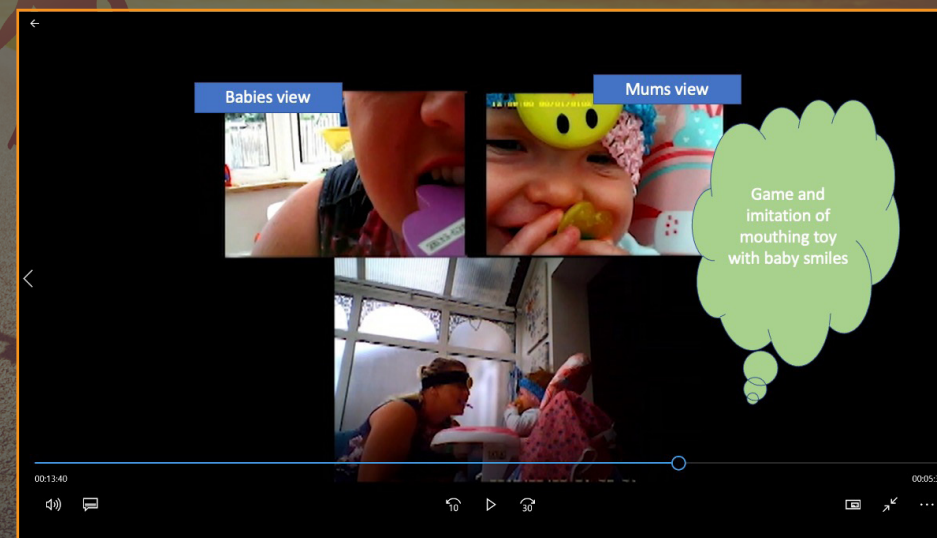
1. What are the opportunities to include first-person perspective video footage to facilitate learning in video feedback support? What emotions and insights does it evoke in diverse groups of parents and children?
2. How do we extend the protocol to older ages? Can children themselves benefit from watching the films?
3. How do we adapt to cross-cultural contexts, in the first instance, an African context?

#### CONTRIBUTORS

Professors Rebecca Pearson  
Deborah James  
Manchester Metropolitan University

Ilaria Costantini  
University of Bristol

Alessandra Prioreschi  
Sarah Van Olst  
University of Witswatersrand



#### References

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Mental Health Intergenerational Transmission



#### PROJECT SUMMARY

Despite decades of research and parenting support programmes, children of mentally ill mothers remain substantially more likely to have mental health problems themselves. In this project, we shed new light on how to harness the potential of modifying parenting for the prevention of child mental health risk, and we study parenting using detailed, ecologically valid and genetically sensitive designs.

#### PROJECT PARTNERS

The core team involved researchers and students in experimental psychology from Bristol Medical School and the Psychology Departments at Manchester Metropolitan University. Partners include Kinneir Dufort and researchers at the University of the Witwatersrand, South Africa.

#### PROJECT LEAD PROFILE

Rebecca Pearson currently holds a Professorship in Psychology at Manchester Metropolitan University and Bristol Medical School. She combines psychology and epidemiology to focus on novel observational and computational methods to understand parenting and apply this to real-world interventions. Pearson has published over 100 peer review papers included in global media and policy.

#### CONTACT DETAILS

Rebecca Pearson

✉ [R.Pearson@mmu.ac.uk](mailto:R.Pearson@mmu.ac.uk)  
 📧 @MHINT2020  
 📧 @RebeccaMPearson

Ilaria Costantini, key PhD student

✉ [ilaria.costantini@bristol.ac.uk](mailto:ilaria.costantini@bristol.ac.uk)

#### FOR THE PLAY STUDY CONTACT

✉ [Alessandra.Prioreschi@wits.ac.za](mailto:Alessandra.Prioreschi@wits.ac.za)

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