



Standard Operating Procedures: Child Development Assessments

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Acknowledgements

The Life Study Standard Operating Procedures (SOPs) for Child Development Assessments were written by Professor Dale Hay of the Department of Psychology, Cardiff University, Professor Alan Emond of the School of Social and Community Medicine, Bristol University, and Dr Suzanne Walton, Life Course Epidemiology and Biostatistics, UCL Institute of Child Health.

The Life Study Scientific Steering Committee is responsible for approving the final edited content of this document. They and the editors thank the authors and members of the Life Study Neurodevelopment Group for giving generously of their time and expertise in assisting with the development of the Life Study SOPs for Child Development Assessments. The Life Study Scientific Steering Committee would also like to thank Professor Hay for her work in piloting these assessments and Professors Hay and Emond for advice and assistance with equipment required and its installation at the first Life Study Centre.

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This work was supported by the Economic and Social Research Council [Grant numbers ES/J007501/1, ES/L002507/1, ES/L002353/1, ES/L012871/1, and ES/N007549/1].

ISSN 2398-1652. DOI: 10.14324/000.wp.1485707

URL: <http://discovery.ucl.ac.uk/1485707/>



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1 Background

Initial discussions regarding child development assessments took place in 2009 as part of the original grant submission for Life Study. Following confirmation of funding in 2011, the Life Study Scientific Protocol Development Group and Scientific Working Groups were established and met to develop on the original measures proposed in the protocol. Consideration was given to potential research questions that could be answered by Life Study, and also the exciting opportunities for novel approaches to be included. A consultative meeting and a web-based consultation on the protocol were held in 2012.

Child assessments had been a distinct feature of the original bid which included a mother-infant interaction task. During the consultations held in 2012, there was wide-spread support for including a measure of parent-infant attachment. It was not considered feasible in the time permitted to use a standard attachment measure (for example the Strange Situation, which would take 15-20 minutes). Instead, a brief measure of maternal sensitivity in infancy was included as this is a recognised predictor of the security of infant-parent attachment.¹ Professor Dale Hay pre-piloted the “Maternal sensitivity task” and the “Joint attention task” in the summer of 2012. From the findings of this research, which demonstrated the predictive validity of both tasks with respect to emotional development and language development, respectively, she made recommendations to Life Study.

Members of the Life Study Neurodevelopment Group provided in-depth expertise from a range of complementary backgrounds. They reviewed the results from the pre-pilot and advised on the neurodevelopment assessments to be included within the Life Study scientific protocol. The Life Study Scientific Steering Committee reviewed recommendations from the Neurodevelopment Group and was responsible for overall decision making and for approval of the final Life Study scientific protocol. This included making decisions as to which assessments, measurements and observations were included for participants attending the Life Study Centres. Members of the Life Study team based at UCL Institute of Child Health gave feedback on draft documents, sourced equipment, tested data capture mechanisms and liaised with external suppliers regarding the specification and development of data capture systems.

¹ De Wolff MS, van Ijzendoorn MH. Sensitivity and attachment: a meta-analysis on parental antecedents of infant attachment. *Child Dev.* 1997 Aug;68(4):571-91.

The Life Study SOPs for Child Development Assessments were not finalised or implemented, as Life Study funding was withdrawn by the funders in October 2015 before the infant visits had commenced.

2 Summary of assessments

The Neurodevelopment assessments within Life Study include observational assessments of child development, assessments of vision and eye tracking tasks. This document focuses on child development tasks. Please see the Life Study website (www.lifestudy.ac.uk) for access to eye tracking and infant eye and vision SOPs which give details of the other tasks.

	6 month visit	12 month visit
Baby	Maternal sensitivity and maternal infant interaction task	Restraint in highchair Joint attention task
	Eye tracking task	Eye tracking task Vision assessment

3 Maternal Sensitivity / Maternal Infant Interaction

3.1 Introduction

This observation explores what skills the baby has developed so far, what sort of toys they like to play with, plus the way in which the mother and her infant interact. This can have an effect on the child’s later development. This mother-infant interaction features a topic-sharing task, using an age appropriate toy.²

3.2 Inclusion criteria

This observational task is to be administered for infants attending the 6 month visit.

3.3 Exclusion criteria

None

² The task was based on an age-appropriate topic sharing task used in Roberts, et al: Siwan Roberts, Rhiannon Fyfield, Eugenia Baibazarova, Stephanie van Goozen, John F. Culling and Dale F. Hay. Parental Speech at 6 Months Predicts Joint Attention at 12 Months. *Infancy*. Volume 18, Issue Supplement s1, pages E1–E15, August 2013

3.4 Equipment

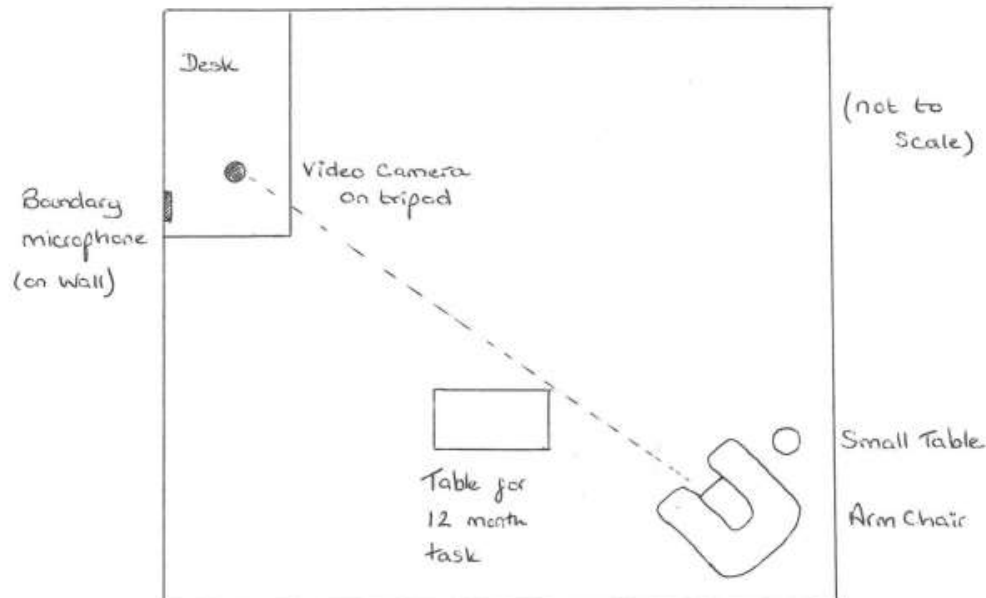
- Activity toy with batteries removed (Fisher Price – Puppy’s Animal Friends)³
- Video Camera (Sony HDR-PJ410 Handcam) with battery, SD card and mini tripod
- Boundary microphone (Olympus ME33)
- Digital voice recorder (Olympus DM-901)
- Comfortable arm chair
- Small table
- Stop watch (Lorus stopwatch)
- Antibacterial surface wipes e.g. Milton wipes



3.5 Preparing the room

The room should be set up as per the sketch below:

³ Image taken from: <http://www.fisher-price.com>



Both the mother⁴ and baby need to be comfortable. Ask the mother to sit in the arm chair with her baby on her lap. The small table should be immediately beside the arm chair so the mother can place the toy on it, if she needs to put it down part way through the task e.g. if she needs two hands to deal with the baby.

The video camera should be positioned on the desk to record both the mother and her baby. The video should capture their heads, upper body and the activity toy. Make sure there is nothing obscuring the view; depending on the room, it may be necessary to push the table for the 12 month child development task back a little. Ensure that an SD card is inserted to capture the video data and that the battery is adequately charged. If necessary adjust the lighting in the room. Please refer to Appendix 1 for instructions on how to operate the video camera.

3.6 Procedure

- 1 Ask the mother to sit in the arm chair nursing her baby. Both should be sat facing the video camera.
- 2 Before beginning, check that the mother has given consent for film recording of herself and her baby. If consent has been obtained you may proceed with the observation.

⁴ We assume throughout that the baby is accompanied by his/her mother

- 3 Make sure that the PC in the room is switched on and the Desktop Device Application is running. To do this click on the shortcut as shown below:



- 4 Enter the infant's participant ID and select the visit type using the dropdown box, then press "search".

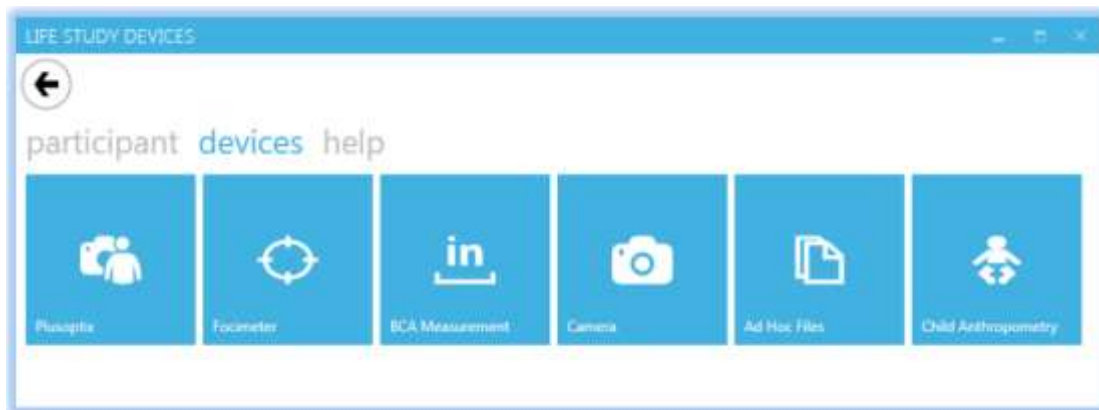
A screenshot of a web application window titled 'LIFE STUDY DEVICES'. It features a search form with two input fields: 'Life Study Id' containing the text 'e.g. MAT-1234-ABCD' and a clear button (X), and 'Visit Type' with a dropdown arrow. A 'SEARCH' button is located below the fields.

- 5 The infant's details (name, date of birth, gender, and visit type) should appear on the screen. Check this is the correct participant. If not, use the arrow in the top left corner to take you back to the participant identification screen to re-enter the correct participant ID.

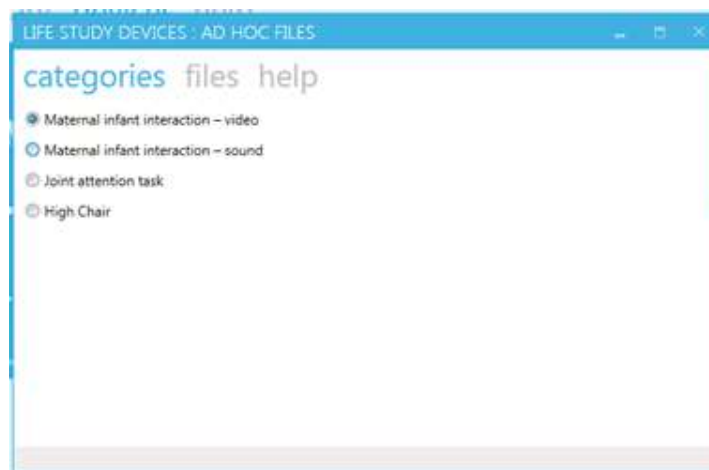
A screenshot of the 'LIFE STUDY DEVICES' application showing participant details. At the top left is a back arrow icon. Below it are the words 'participant devices help'. The details listed are: Surname: JUDD, First Name: Peter, Date of Birth: 14-Oct-2014, Gender: Male, and Visit Type: Six Month Visit. A small number '5' is visible in the bottom right corner of the screenshot area.

- 6 Select "devices" which appears above the participant details.
- 7 Select "Ad Hoc Files".

⁵ Note – all names and dates of birth relate to fictitious participants



- 8 Select “Maternal infant interaction – video”.



- 9 Open the lens cover and switch the camera on by opening the LCD monitor (see Appendix 1 for instructions on how to operate the video camera). Ensure that the video camera is positioned and focused to fully capture the mother, baby and the activity toy.
- 10 Make sure that the stop watch is set to zero by pressing the “reset” button. Five zeros should appear.
- 11 Open the Survey for Maternal Infant Interaction Task on the PC (see Appendix 2). Hold the toy so the mother can see it and use the text on the screen to explain the task to the mother and check that she is happy to proceed with the task. The text says: *“In this task, we are just going to observe you and your baby playing with a toy. I will ask you to sit comfortably with your child in the chair. I will hand you this toy and I would like you to show it to your child. I will video record you and your child for three minutes. Are you happy to continue with this task?”* Also, explain that we have taken the batteries out because we don’t want a lot of extra noises on the video. If she is happy to proceed, continue with the task as below, if not record why she does not want to proceed.

- 12 When the infant is comfortable on the mother's lap, hand the mother the activity toy.
- 13 Press the "start" button on the video camera, start the stop watch and start the sound recording.
- 14 Stop the observation after 3 minutes. Press "Start/Stop" on the video camera. Press "stop" on the stop watch, and stop the sound recording.
- 15 If the mother has not said anything at all to her baby by 2 minutes, then encourage the mother by saying something neutral like "Yes, that's right, show him / her the toy."
- 16 Save the video data and the sound recording⁶
- 17 Thank the mother for taking part in this observation and give some general positive feedback (as below).
- 18 Complete the Survey for Maternal Infant Interaction Task (see Appendix 2) to record:
 - a) whether the measurement was taken and if not, why
 - b) your staff ID number
 - c) the room in which the task was carried out.
- 19 Wipe the activity toy with an antibacterial surface wipe after use.

3.7 Scoring

This will be done at a later stage from the video clips and sound files.⁷

3.8 Feedback

General positive feedback for cooperating with the task should be given. Do not say anything that might seem judgmental. There is always something pleasant that can be said to every baby. The general principle would be to comment neutrally on the baby's behaviour, but in a way that comes across as more positive.

For example,

- if the baby handled the toy roughly, say something like "*he/she's really enjoying it, isn't he/she?*"
- if the baby had ignored the toy and had been fussy or wanting to stop doing the task, say something like, "*he/she likes other types of toys better than that, doesn't he/she?*"

⁶ SOPs were to have included further details in this section which had not been finalised when Life Study was closed.

⁷ The rating scale for maternal sensitivity task is derived from the National Institute of Child Health and Human Development (NICHD) study: NICHD Early Child Care Research Network. Child Care and Mother-Child Interaction in the First 3 years of Life. *Developmental Psychology* 1999. Vol 35, No 6, 1399-1413.

4 Restraint in high chair

4.1 Introduction

This observation is taken directly from the Laboratory Temperament Assessment Battery and adapted for a high-chair rather than a car seat.⁸ Scoring has been adapted for on-the-spot assessment.

The purpose of this task is to see how different infants respond to limitations on their freedom. Infants often need to be secured in high chairs for their own safety. Some infants may become more frustrated than others in these circumstances. This brief task is used to identify this difference in infants' temperaments.

4.2 Inclusion Criteria

All infants attending the 12 month visit.

4.3 Exclusion Criteria

None

4.4 Equipment

- “Mamas & Papas bop” highchair⁹ (N.B. The highchair is suitable for infants aged 6 months to 3 years)
- Video Camera (Sony HDR-PJ410 Handcam) with battery, SD card and mini tripod
- Stop watch (Lorus stopwatch)
- Antibacterial surface wipes e.g. Milton wipes



⁸ Goldsmith, H. H. & Rothbart, M.K. (1999). The Laboratory Temperament Assessment Battery (Prelocomotor Version, Edition 3.1. Madison, WI: University of Wisconsin-Madison)

⁹ Image taken from: <http://www.amazon.co.uk>

4.5 Preparing the room

This task takes place with the highchair away from other distractions. The video camera is positioned to record a close-up, frontal shot of the infant's face and entire body in the highchair (see Appendix 1 for instructions on how to operate the video camera).

4.6 Procedure

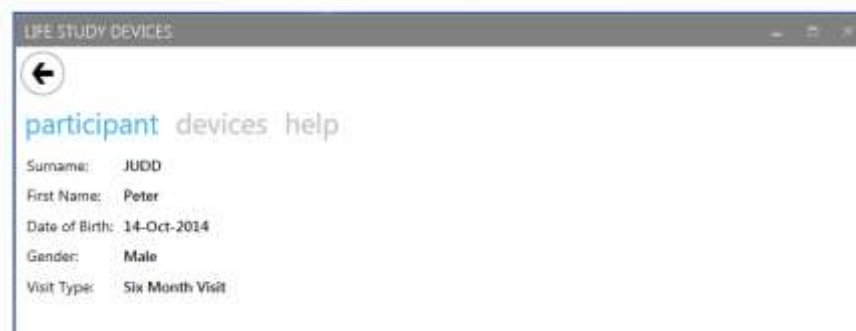
- 1 Before beginning, check that the mother has given consent for film recording of her baby. If consent has been obtained you may proceed with the observation.
- 2 Make sure that the PC in the room is switched on and the Desktop Device Application is running. To do this click on the shortcut as shown below:



- 3 Enter the infant's participant ID and select the visit type using the dropdown box, then press "search".



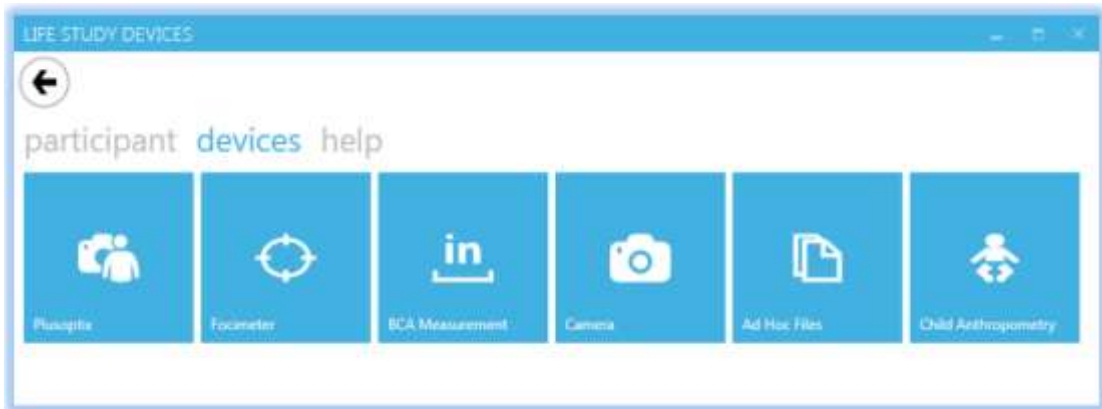
- 4 The participant's details (name, date of birth, gender, and visit type) should appear on the screen. Check this is the correct participant. If not, use the arrow in the top left corner to take you back to the participant identification screen to re-enter the correct participant ID.



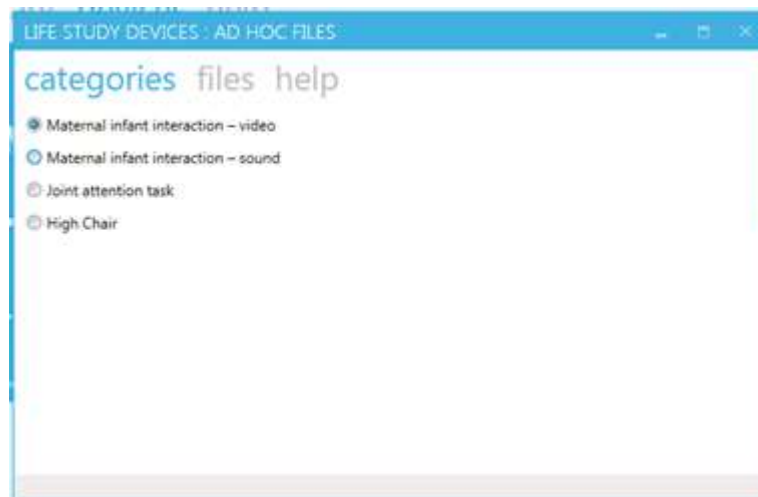
10

¹⁰ Note – all names and dates of birth, relate to fictitious participants

- 5 Select “devices” which appears above the participant details.
- 6 Select “Ad Hoc Files”.



- 7 Select “High Chair”.



- 8 Open the Survey for Restraint in High Chair on the PC (see Appendix 3), and use the text to explain the task to the mother. The text says:

“The purpose of this task is to see how different infants respond to limitations on their freedom. Infants often need to be secured in highchairs or car seats for their own safety. Some infants may become more frustrated than others in these circumstances. This brief task is used to identify this difference in infants’ temperaments.

This is not a test of an individual baby’s IQ or personality; it is just a way of studying babies of this age in general.

For this task, we will ask you to put your child into this highchair, and to strap him/her in. We will leave your child in the highchair for 30 seconds (unless they become very distressed). We will make a video recording of your child during that time and I will also note whether your child cries or struggles at all.

At the end of 30 seconds you can take your child out, or if he/she is happy in there, we can leave him/her in the highchair for the next task.

Are you happy to continue with this task?"

- 9 If the mother is happy to proceed, continue with the task as below, if not, record why she does not want to proceed.
- 10 Make sure that the stop watch is set to zero by pressing the “reset” button. Five zeros should appear.
- 11 Open the lens cover and switch the camera on by opening the LCD monitor (see Appendix 1). Check that the video camera battery is adequately charged and that there is an SD card inserted. Ensure that the video camera is positioned and focused to fully capture the baby when seated in the high chair. Press the “START/STOP” button to start recording.
- 12 Move to stand to the side and slightly behind the high chair.
- 13 Ask the mother to pick her infant up and place him/her into the highchair and then, using the safety harness attached to the chair, strap him/her in. To avoid blocking the view of the camera she should stand to the side of the highchair while strapping the child in it. **The mother should not talk to the infant while placing and strapping them in the highchair.** Once the infant is secured in the highchair the mother should move to stand next to you (to the side and slightly behind the chair).
- 14 As soon as the mother has placed the infant in the highchair and the straps are in place, press the “start” button on the stop watch.
- 15 The infant is then left in the high chair for 30 seconds. The infant should be able to see both you and his/her mother by turning to either side. **Neither you nor the mother should talk during this time.**
- 16 If the infant immediately becomes severely distressed (sobbing and tearful), stop the procedure at 10 seconds. Stop the stop watch at that point.
- 17 When the stop watch screen displays 30 seconds (or at 10 seconds if the infant has been distressed immediately), score the infant’s behavior, using the definitions described below and record this in the Survey for Restraint in High Chair (see Appendix 3).
- 18 Stop the video camera from recording by pressing the “START/STOP” button.

- 19 Thank the mother for her cooperation and explain that this task is complete. If the infant is happy and comfortable in the highchair leave them in it for the next task (Joint attention task).
- 20 Complete the Survey for Restraint in High Chair (Appendix 3) to record:
 - a) how the infant responded to the task (see Section 4.7 below).
 - b) whether the task was completed and if not, why.
 - c) your staff ID number.
 - d) the room in which the task was carried out.
- 21 After the task is complete wipe the highchair down with an antibacterial surface wipe.
- 22 Ensure that the video data file is saved.¹¹

4.7 Scoring

The following coding definitions are adapted from the dimensions of behaviour mentioned in the LabTAB scoring manual for use on the spot.

Researcher's Rating of the Baby's State Prior to the Task:

Just before the baby is placed in the high chair, is he/she:

- 1 Drowsy or half-asleep
- 2 Alert and content, interested in what's happening
- 3 Somewhat fussy, perhaps frowning or making little fussy whimpers
- 4 Already starting to cry before being placed in the high chair

Immediately after the researcher has stopped the stopwatch, he/she records an answer to the following questions:

Did the infant cry?

- 0 No
- 1 Made distressed whimpers or fussing sounds, but did not show full-blown crying
- 2 Full-blown crying sounds with sobs and/or tears

¹¹ SOPs were to have included further details in this section which had not been finalised when Life Study was closed.

Did the infant struggle in the high chair?

- 0 No
- 1 Some wriggling about in resistance to the straps, but settled down right away
- 2 Much thrashing about and/or kicking out in response to being strapped into the high chair

For both these questions, always tick the middle score (1) if you're not sure.

4.8 Feedback

General positive feedback for cooperating with the task should be given. Try very hard not to say anything that seems judgmental. There is always something pleasant that can be said to every baby, for example, to a baby who was fine in the high chair, *'Oh, look at you, sitting nicely in your high chair,'* or, if it didn't go so well, *'OK, you decided you didn't like that, didn't you?'*

Make sure the parents realise this is not a test of an individual baby's personality or IQ, just a way of studying babies in general at this age.

5 Joint Attention Task

5.1 Introduction

This observation is based on the ‘Gaze following task’ within the Early Social Communication Scales.¹² At around one year of age, babies are beginning to notice what other people pay attention to. They’re also beginning to communicate with other people, sometimes with their first words but also by pointing things out for other people to notice. In this task, we are going to see whether the infants notice what you’re looking at and try to point things out to you.

5.2 Inclusion criteria

All infants attending the 12 month visit.

5.3 Exclusion Criteria

Babies who are blind or have a significant visual impairment are excluded from this study. (Babies need to be able to see the researcher pointing and the brightly coloured posters).

5.4 Equipment

- Video Camera (Sony HDR-PJ410 Handycam) with battery, SD card and mini tripod
- Table and two chairs
- Highchair (Mamas & Papas bop highchair)
- Four brightly coloured posters (such as below)¹³

Figure 1 Posters for use in the Joint Attention Task



¹² A Manual for the Abridged Early Social Communication Scales (ESCS). Peter Mundy, Christine Delgado, Jessica Block, Meg Venezia, Anne Hogan, & Jeffrey Seibert. University of Miami © 2003

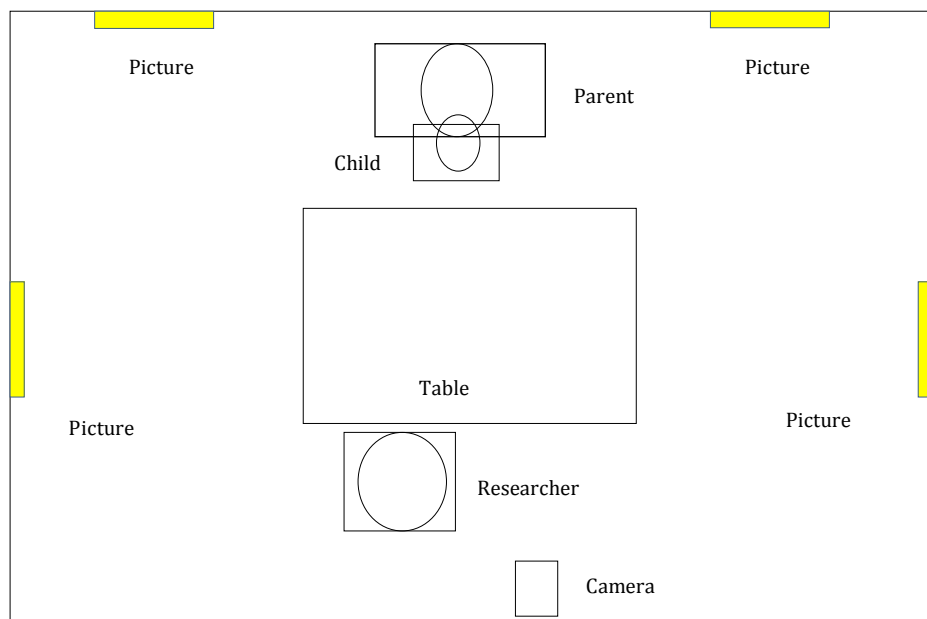
¹³ Images taken from: <http://www.gbposters.com/>

5.5 Preparing the room

The room should be set up with a table and chair for researcher one side and a chair for the mother and infant on the opposite side. Alternatively the infant can be sat in the highchair instead of sitting on the mother's lap. Four brightly coloured posters (each with different cartoon characters) should be posted on the wall behind the infant. The four posters are located to the left, behind left, behind right and right of the child as shown below (Figure 2) and in the order above (Figure 1).

The video camera should be positioned in one corner of the room (behind / to the side of the researcher) approximately 1 to 1.5 meters away from the infant to capture the infant's face, arms and upper body **and** the researcher's arm (which does the pointing). Please refer to the video camera user guide for video camera set up (see Appendix 1).

Figure 2 Room set-up for Joint Attention Task



5.6 Procedure

N.B. This task follows the restraint in the high chair. If everything is flowing smoothly and the infant is happy in the high chair, then this task can follow on directly. Alternatively, it may be more appropriate to have a short break.

- 1 Before beginning, check that the mother has given consent for film recording of her baby. If consent has been obtained you may proceed with the observation.

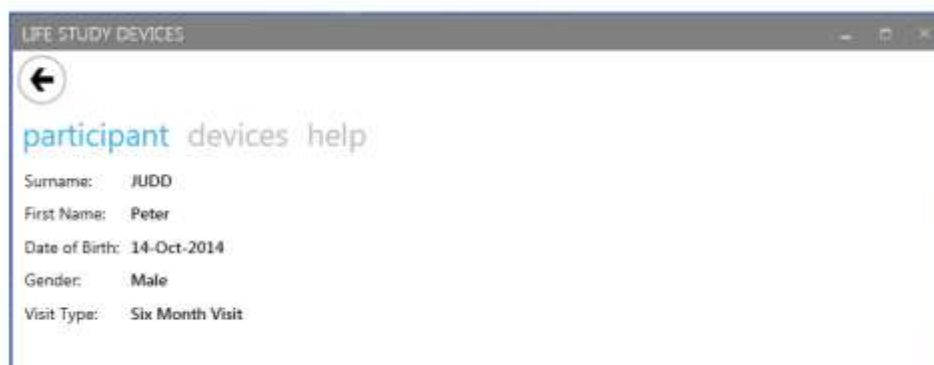
- 2 Make sure that the PC in the room is switched on and the Desktop Device Application is running. To do this click on the shortcut as shown below:



- 3 Enter the infant’s participant ID and select the visit type using the dropdown box, then press “search”.



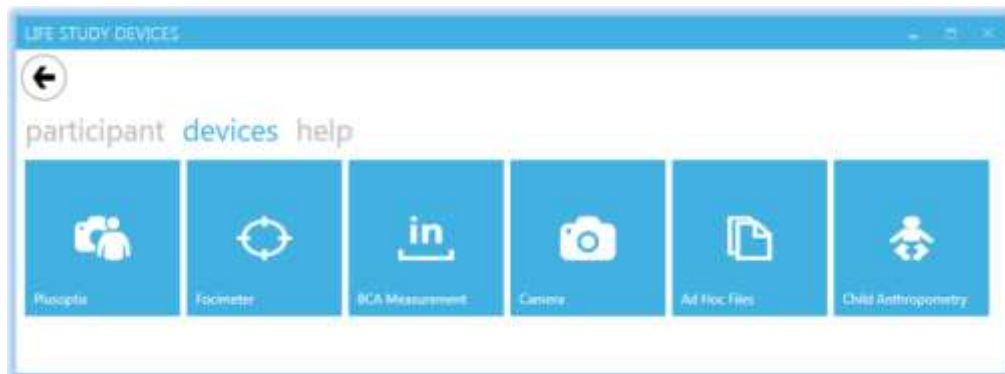
- 4 The participant’s details (name, date of birth, gender, and visit type) should appear on the screen. Check this is the correct participant. If not, use the arrow in the top left corner to take you back to the participant identification screen to re-enter the correct participant ID.



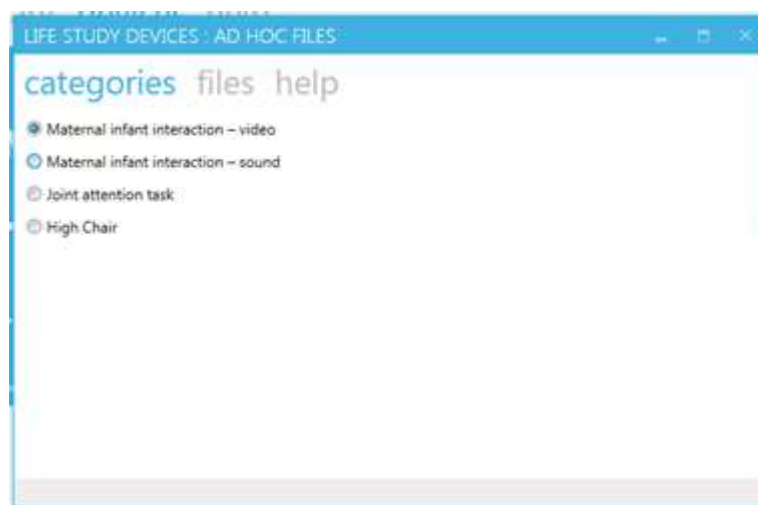
14

- 5 Select “devices” which appears above the participant details.
- 6 Select “Ad Hoc Files”.

¹⁴ Note – all names and dates of birth, relate to fictitious participants



- 7 Select “Joint attention task”.



- 8 Open the Survey for the Joint Attention Task on the PC (see Appendix 4), and use the text to explain the task to the mother. The text says:

“In this task, we are going to see whether your baby notices what other people are looking at and whether he / she tries to point things out to you.

Once he / she is settled, I will point to the posters on the wall in turn while saying your child's name. It's really important that during this time you try not to point or interact with your child.

Are you happy to continue with this task?”
- 9 If the mother is happy to proceed, continue with the task as below, if not, record why she does not want to proceed.
- 10 Open the lens cover and switch the camera on by opening the LCD monitor (see Appendix 1). Check that the video camera battery is adequately charged and that there is an SD card inserted. Ensure that the video camera is positioned and focused to fully capture the baby when seated in the high chair. Press the

“START/STOP” button to start recording. (This will capture the infant’s state of alertness / cooperation / mood immediately prior to the task).

- 11 Depending on the mood of the infant, sit the infant on the mother’s lap or in the high chair, in the position as shown in Figure 2.
- 12 Check that the video camera is capturing the infant’s face, arms and upper body. The video needs to capture where the baby looks and if they point to anything as well as your arm pointing at the posters.
- 13 Make sure the infant is settled prior to the Joint Attention Task commencing. If the infant doesn’t settle allow the mother to try to settle the infant and then try again. Similarly if the infant becomes upset part way through the task allow the mother to try to settle the infant and then continue. Overall, only attempt the task twice.
- 14 Begin the trial by drawing the infant’s attention to your face. The infant’s attention can usually be directed by calling the infant’s name, tapping the table or gently touching the infant, and then touching one’s own nose.
- 15 The task involves you looking and pointing to the posters on the wall while emphatically stating the infant's name.
- 16 You should attempt to direct the infant’s attention to each poster in the following order: Left, Left and Behind, Right, Right and Behind.
- 17 On all trials, you obtain the infant’s attention, then turn your entire torso (not just your head and arm) and visually orientate to a poster while pointing at it. To reduce the likelihood that arm movement will affect the infant's behaviour or block the camera’s view of the infant’s face, you should always point ensuring that the elbow of your pointing arm is in contact with your waist (this is known as a “short arm point”).
- 18 When pointing to the posters behind the infant (the left behind and right behind trials) you should lean slightly forward and to the left or right of the infant as if observing something interesting directly behind the infant. Make sure however that the pointing finger remains at least two feet in front of the child.
- 19 Whilst pointing you should say the infant’s name three times increasingly emphatically (“*John, John!, JOHN!!*”). Do not look back at the infant until you have stated the infant’s name for the third time and paused. Allow approximately two seconds between each enunciation of the infant's name. Hence, each pointing episode is maintained for at least six seconds.
- 20 Following each trial you may make a statement related to the target (e.g., “*There’s,*” “*Did you see,?*”) to either acknowledge that the infant

turned and would have seen the poster or to further engage the infant if he / she did not turn.

- 21 Move onto the next trial / poster (in the sequence as above).
- 22 Finally, stop the camera from recording by pressing the “START/STOP” button.
- 23 Thank the mother for her cooperation and explain that that is the end of the task.
- 24 Complete the Survey for the Joint Attention Task to record:
 - a) whether the task was completed and if not, why
 - b) your staff ID number
 - c) the room in which the task was carried out.
- 25 Ensure that the video data file is saved.¹⁵
- 26 After the task is complete, wipe the highchair with an antibacterial surface wipe.

¹⁵ SOPs were to have included further details in this section which had not been finalised when Life Study was closed.

5.7 Summary of Joint Attention Task Procedures¹⁶



5.8 Scoring

The scoring will be done later by researchers using the video tapes:

- Gaze following (GF) of the experimenters gaze and point;
- Gaze alternation (GA) between target poster and experimenter and
- Pointing (P) behaviour during the task.

At the end of all four trials there is also an overall participation rating to be scored.

¹⁶ Taken from: A Manual for the Abridged Early Social Communication Scales (ESCS). Peter Mundy, Christine Delgado, Jessica Block, Meg Venezia, Anne Hogan, & Jeffrey Seibert. University of Miami © 2003

Element Name	Definition	Scoring criteria for each trial
Gaze Following (GF) / Looks where you point	Looking at the poster where the experimenter is looking and pointing	2 for looking at the correct poster 1 for looking in the correct direction (but not at the poster) 0 for looking in the wrong direction, looking at the experimenter or looking away
Gaze alternation (GA) / Looks back at you	Looking in direction of poster, and then immediately looking at the experimenter	1 for looking at any object, and then looking at the experimenter 0 for the absence of the above
Points (P)	Pointing somewhere using the index finger	1 infant points to something 0 infant does not point to anything

Overall participation rating:

2 – child did whole task well

1 – there were some difficulties but the child did parts of task well

0 – child uncomfortable and unwilling to do task

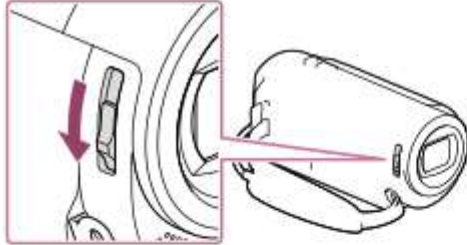
5.9 Feedback

No feedback will be given.

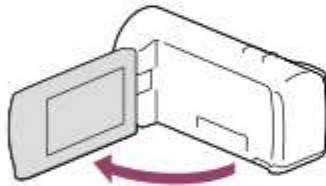
6 Appendix 1

Video camera Instructions

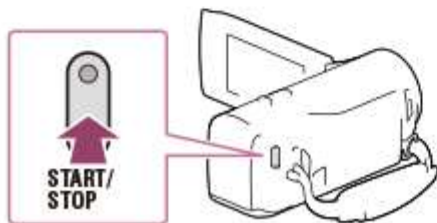
1. Open the lens cover.



2. Open the LCD monitor of this product and turn the power on.



3. Press START/STOP to start recording.
 - To stop recording, press START/STOP again.



Note:

- 1) See footnote for source of images.¹⁷
- 2) SOPs were to have included further details in this section which had not been finalised when Life Study was closed.

¹⁷ Images from: <http://helpguide.sony.net/cam/1440/v1/en/contents/TP0000557749.html>

7 Appendix 2

Survey for Maternal Infant Interaction Task

Variable	Question	Responses	Universe								
MatSeInt	<p>In this task, we are just going to observe you and your baby playing with a toy.</p> <p>I will ask you to sit comfortably with your child in the chair. I will hand you this toy and I would like you to show it to your child. I will video record you and your child for three minutes.</p> <p>Are you happy to continue with this task?</p>	<p>Choice: single</p> <table border="1"> <tr> <td>1</td> <td>Mother happy to continue</td> </tr> <tr> <td>2</td> <td>Mother does not want to do the task</td> </tr> </table>	1	Mother happy to continue	2	Mother does not want to do the task	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 2) // 6 months</p>				
1	Mother happy to continue										
2	Mother does not want to do the task										
MatSeWyN	<p>Why have you decided not to do this task?</p> <p>ENQUIRE SENSITIVELY BUT DO NOT PUSH FOR AN ANSWER</p>	<p>Open: 150</p>	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 2) // 6 months And (MatSelnt = 2) // Does not want to do task</p>								
MatSedon	<p>ADMINISTER THE MATERNAL CHILD INTERACTION TASK ACCORDING TO THE SOP</p> <p>RECORD IF YOU MANAGED TO COMPLETE THE TASK.</p>	<p>Choice: single</p> <table border="1"> <tr> <td>1</td> <td>Yes</td> </tr> <tr> <td>2</td> <td>No - technical problems</td> </tr> <tr> <td>3</td> <td>No - problem related to mother or baby</td> </tr> <tr> <td>4</td> <td>No - other problems</td> </tr> </table>	1	Yes	2	No - technical problems	3	No - problem related to mother or baby	4	No - other problems	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 2) // 6 months And (MatSelnt = 1) // Agrees to task</p>
1	Yes										
2	No - technical problems										
3	No - problem related to mother or baby										
4	No - other problems										

MatSeSID	ENTER YOUR STAFF ID NUMBER (SO THAT WE HAVE A RECORD OF WHO ADMINISTERED THE TASK)	Number: 0, 4, 1000..5000	If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 2) // 6 months And (MatSeInt = 1) // Agrees to task
MatSeRoo	ENTER THE ROOM NUMBER IN WHICH THE TASK WAS ADMINISTERED	Number: 0, 2, 1..99	If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 2) // 6 months And (MatSeInt = 1) // Agrees to task

8 Appendix 3

Survey for Restraint in High Chair

Variable	Question	Responses	Universe				
HghChInt	<p>The purpose of this task is to see how different infants respond to limitations on their freedom. Infants often need to be secured in highchairs or car seats for their own safety. Some infants may become more frustrated than others in these circumstances. This brief task is used to identify this difference in infant's temperaments.</p> <p>This is not a test of an individual baby's IQ or personality; it is just a way of studying babies of this age in general.</p> <p>For this test, we will ask you to put your child into this highchair, and to strap him/her in. We will leave your child in the highchair for 30 seconds (unless they become very distressed). We will make a video recording of your child during that time and I will also note whether your child cries or struggles at all.</p> <p>At the end of 30 seconds you can take your child out, or if he/she is happy in</p>	<p>Choice: single</p> <table border="1"> <tr> <td>1</td> <td>Mother happy to continue</td> </tr> <tr> <td>2</td> <td>Mother does not want to do the task</td> </tr> </table>	1	Mother happy to continue	2	Mother does not want to do the task	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months</p>
1	Mother happy to continue						
2	Mother does not want to do the task						

Variable	Question	Responses	Universe								
	there, we can leave him/her in the highchair for the next test. Are you happy to continue with this test?										
HghChWyN	Why have you decided not to do this task?	Open: 150	If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months And (HghChInt = 2)// Does not want to do the test								
HghChPre	INTERVIEWER CODE - JUST BEFORE THE CHILD IS PLACED IN THE HIGHCHAIR IS SHE/HE...?	Choice: single <table border="1"> <tr> <td>1</td> <td>Drowsy or half-asleep</td> </tr> <tr> <td>2</td> <td>Alert and content, interested in what is happening</td> </tr> <tr> <td>3</td> <td>Somewhat fussy, perhaps frowning or making little fussy whimpers</td> </tr> <tr> <td>4</td> <td>Already starting to cry before being placed in the highchair</td> </tr> </table>	1	Drowsy or half-asleep	2	Alert and content, interested in what is happening	3	Somewhat fussy, perhaps frowning or making little fussy whimpers	4	Already starting to cry before being placed in the highchair	If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months And (HghChInt = 1) // Agrees to do test
1	Drowsy or half-asleep										
2	Alert and content, interested in what is happening										
3	Somewhat fussy, perhaps frowning or making little fussy whimpers										
4	Already starting to cry before being placed in the highchair										
HghChTm	INTERVIEWER CODE - WHEN DID YOU STOP THE TASK?	Choice: single <table border="1"> <tr> <td>1</td> <td>At 10 seconds (due to child distress)</td> </tr> <tr> <td>2</td> <td>At 30 seconds (standard protocol)</td> </tr> <tr> <td>3</td> <td>Other time</td> </tr> </table>	1	At 10 seconds (due to child distress)	2	At 30 seconds (standard protocol)	3	Other time	If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months And (HghChInt = 1) // Agrees to do test		
1	At 10 seconds (due to child distress)										
2	At 30 seconds (standard protocol)										
3	Other time										
HghChCry	INTERVIEWER: RECORD WHETHER THE INFANT CRIED.	Choice: single <table border="1"> <tr> <td>1</td> <td>No</td> </tr> </table>	1	No	If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months And (HghChInt = 1) // Agrees to do test						
1	No										

Variable	Question	Responses	Universe						
	IF YOU ARE NOT SURE, CHOOSE THE MIDDLE OPTION	<table border="1"> <tr> <td>2</td> <td>Made distressed whimpers or fussing sounds, but did not show full-blown crying</td> </tr> <tr> <td>3</td> <td>Full-blown crying sounds with sobs and/or tears</td> </tr> </table>	2	Made distressed whimpers or fussing sounds, but did not show full-blown crying	3	Full-blown crying sounds with sobs and/or tears			
2	Made distressed whimpers or fussing sounds, but did not show full-blown crying								
3	Full-blown crying sounds with sobs and/or tears								
HghChSt	<p>INTERVIEWER: RECORD WHETHER THE INFANT STRUGGLED IN THE HIGHCHAIR</p> <p>IF YOU ARE NOT SURE, CHOOSE THE MIDDLE OPTION</p>	<p>Choice: single</p> <table border="1"> <tr> <td>1</td> <td>No</td> </tr> <tr> <td>2</td> <td>Some wriggling about in resistance to straps, but settled down right away</td> </tr> <tr> <td>3</td> <td>Much thrashing about and/or kicking out in response to being strapped into the highchair</td> </tr> </table>	1	No	2	Some wriggling about in resistance to straps, but settled down right away	3	Much thrashing about and/or kicking out in response to being strapped into the highchair	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months And (HghChInt = 1) // Agrees to do test</p>
1	No								
2	Some wriggling about in resistance to straps, but settled down right away								
3	Much thrashing about and/or kicking out in response to being strapped into the highchair								
HghChdn	<p>HAVE YOU MANAGED TO COMPLETE THE HIGHCHAIR RESTRAINT TEST? IF YOU ONLY GOT PART WAY THROUGH THE TASK CODE WHY YOU DID NOT MANAGE TO COMPLETE THE TASK.</p>	<p>Choice: single</p> <table border="1"> <tr> <td>1</td> <td>Yes</td> </tr> <tr> <td>2</td> <td>No - technical problems</td> </tr> <tr> <td>3</td> <td>No - problem related to mother or baby</td> </tr> </table>	1	Yes	2	No - technical problems	3	No - problem related to mother or baby	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months And (HghChInt = 1) // Agrees to do test</p>
1	Yes								
2	No - technical problems								
3	No - problem related to mother or baby								

9 Appendix 4

Survey for Joint Attention Task

Variable	Question	Responses	Universe				
JAttEx	<p>Can I just check, does your child have any significant visual impairment?</p> <p>INTERVIEWER: DO NOT INCLUDE SLIGHT VISION PROBLEMS. ONLY CODE YES IF CHILD WILL NOT BE ABLE TO SEE THE POSTERS</p>	<p>Choice: single</p> <table border="1"> <tr> <td>1</td> <td>Yes</td> </tr> <tr> <td>2</td> <td>No</td> </tr> </table>	1	Yes	2	No	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months</p>
1	Yes						
2	No						
JAttInt	<p>In this task, we are going to see whether your baby notices what other people are looking at and whether he/she tries to point things out to you.</p> <p>Once he/she is settled, I will point to the posters on the wall in turn while saying your child's name. It's really important that during this time you try not to point or interact with your child.</p> <p>Are you happy to continue with this task?</p>	<p>Choice: single</p> <table border="1"> <tr> <td>1</td> <td>Mother happy to continue</td> </tr> <tr> <td>2</td> <td>Mother does not want to do the task</td> </tr> </table>	1	Mother happy to continue	2	Mother does not want to do the task	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months And (JAttex = 2) // Does not have visual impairment</p>
1	Mother happy to continue						
2	Mother does not want to do the task						
JAttWyNo	<p>Why have you decided not to do this task?</p>	<p>Open: 150</p>	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months And (JAttInt = 2) // Mother does not agree</p>				

Variable	Question	Responses	Universe						
JAttDone	<p>INTERVIEWER CODE - HAVE YOU MANAGED TO COMPLETE THE JOINT ATTENTION TASK?</p> <p>INTERVIEWER: IF YOU ONLY GOT PART WAY THROUGH THE TASK CODE WHY YOU DID NOT MANAGE TO COMPLETE THE TASK.</p>	<p>Choice: single</p> <table border="1" data-bbox="878 363 1388 491"> <tr> <td data-bbox="878 363 927 395">1</td> <td data-bbox="927 363 1388 395">Yes</td> </tr> <tr> <td data-bbox="878 395 927 427">2</td> <td data-bbox="927 395 1388 427">No - technical problems</td> </tr> <tr> <td data-bbox="878 427 927 491">3</td> <td data-bbox="927 427 1388 491">No - problem related to mother or baby</td> </tr> </table>	1	Yes	2	No - technical problems	3	No - problem related to mother or baby	<p>If (RespType = 1) // Mother And (ModeType = 1) // CAPI And (Sweep = 3) // 12 months And (JAttInt = 1) // Mother agrees to task</p>
1	Yes								
2	No - technical problems								
3	No - problem related to mother or baby								