

Repetitive Behaviour Interaction Coding System (RBICS)

Coding the START and END of a repetitive episode

Child Repetitive Behaviour(s)

Where RB are continuous coding occurs via chunking. For example the child may use a toy or object and run it along their lips, they may engage in this behaviour two or three times, this may be considered as one episode – ie. it is chunked together.

If the object used to elicit the interest / repetitive behaviour changes ie. the child may switch from running the pizza cutter on the hair, to using part of the marble helter skelter – this would be considered a new episode of repetitive behaviour.

It is important that the child must initiate the repetitive behaviour, it should not originate from the parent ie. if the parent builds a tower and then causes it to fall down and the child copies this behaviour, it should not be considered repetitive; or if the parent repetitively presses a button on a toy to elicit a sounds and then the child begins this sequence, it should not be considered repetitive, modelling is excluded.

Parent Response Behaviour(s)

When the parent engages in a management strategy this would be coded.

It is important to consider the timeframe from when the repetitive behaviour / interest occurs to the parent's response strategy. Strategies should occur immediately after the behaviour or within a maximum of five seconds to be considered a response and in order to be coded. When coding the type of parent management strategy, it is important to consider what the parent has previously been doing. For example, it may be the parent has been making a suggestion to the child before the repetitive behaviour occurs. If the parent continued with the same request, this then is not coded as distraction (unless the parent introduces some new object/item).

In situations where it is unclear whether the parent has responded to the repetitive behaviour, the verbal / non verbal behaviour(s) of the parent should be considered a guide towards their response. For example if the parent simply watches for five seconds, this is coded as passive non intervening.

If a repetitive behaviour is not within the parent's view or it is clear that they are not explicitly aware of it, then it cannot be coded.

Child Outcome

As a guideline, code the child's response within approximately 5seconds of the parent management strategy.

Thus, as a rough guide, an episode would last a minimum of around fifteen seconds:

Child RB →	Parent Response →	Child Outcome
(5secs or more)	(within approx 5 secs)	(within approx 5 secs)

Part A: Defining Repetitive Behaviour

Some actions / behaviours may be able to be coded when they first occur, these include:

- (2) *unusual repetitive interests*
- (3) *sensory interests*
- (4) *repetitive motor movements*

*The other categories of (1) **narrowed repetitive interests**, (2b) **non functional use of parts of toys**, (5) **repetition of unusual sounds / words** and (6) **combined**, should be coded when observed on a second or third occasion and after a pause / return to the behaviour.*

Where a combination of repetitive behaviours occur, these should be marked individually and the category 'combined' should also be marked.

Exclusions

- *Where a toy involves repetition eg. rolling a car down a ramp, this is not in principle considered a repetitive behaviour. The use of the toy is functional. Other examples include the toy fruit which can be cut into a number of pieces or the pop up toy where the child is required to press the buttons.*
- *Behaviour exceptions which will not be coded included jargon or babble unless the jargon sound ie. intonation, pitch, phrase / sound is repetitive or unusual.*
- *If a child repetitively gives the toy to their parent. This would be excluded as it can be viewed as a repeated communication opposed to behaviour.*

Inclusions

- *Happy flapping ie. Where the child frequently and repeatedly (through the 20minute play session) excitedly flaps their arms / hands in response to a toy or interaction; it would only be coded once if the parent makes no response to it. It would be coded again if the parent appears to respond specifically to the flapping.*

Part B: Parental Response / Management Strategy

It is important to code strategies separately, coding the sequence of events, for example the parent may state “stop that now,” lift the child away from an object and say “we are going to do something else... look at this train...”

This would be coded as two separate episodes of behaviour since there are two strategies occurring.

The first strategy is: ACTIVE PREVENTING (telling child to stop and moving them away)

The other strategy is : ACTIVE DISCTRACTING/ DEVELOPING (attempting to distract child)

Strategies have been grouped together into four domains : -

- *(1) Passive–non intervening**
- *(2) Active –preventing*
- *(3) Active–engaging*
- *(4)Active–distracting / developing*

**It is important to note that passive non intervening can only be coded if it is clear that the parent is aware ie. they see the repetitive behaviour occurring and choose to engage in this strategy. The strategy cannot be used for coding if the parent does not see the repetitive behaviour*

When the passive non intervening strategy is used, it is likely that the coded outcome will be that the child has stopped of their own accord.

Part C: Child Outcome

It is important to think about the child's response to the parental management strategy. Attention should be paid to verbal and non verbal cues, which would indicate one of the following five categories:

*(1) **Positive parent child interaction** –specifically thinking about joint attention and shared communication*

*(2) **Appropriate child action-** the child may discontinue engagement in the repetitive behaviour, ie. through distraction but may initiate some other behaviour and or, offer no social response towards their parent.*

*(3)**No change, the behaviour remains the same** – there is no significant difference in any aspect of the child's behaviour. They show no response or change to the parental management strategy.*

*(4)**The child becomes distressed** – the child may exhibit obvious signs of distress, eg. Crying / shouting. There may also be an escalation in the child's behaviour.*

*(5)**The child stops or moves on to something of their own accord*** – the child moves on to play with another object. They have found something else to distract themselves with but are not engaging with their parents or offering any positive behaviour towards the parental management strategy.*

*This outcome (5) where the child stops of their own accord, would logically follow the parental management strategy (1) passive non intervening if it occurred within 15seconds. If the child starts to do something else and the RB continues then this would be coded as (3).

Part A: Defining Repetitive Behaviour

Consider:

1. Is child displaying **narrowed repetitive interest(s) or repetitive refusal?**

Guidelines

Narrowed Repetitive Interest(s)

- This includes attachments to one object eg. a red fire engine, toy train, blue ball, pizza cutter.
- The child's behaviour indicates that they have their own agenda and may not respond to directions or prompts from their parents.
- The child may also be set on a sequence of play. ie. the child may repeatedly press the button on the toy cash register, the register drawer opens, the child closes the drawer and repeats the sequence or the child may continually press buttons on the till – the child is demonstrating a stuckness.
- The child may return to play with the object and / or show little or no interest in other toys. ie. mum builds a tower of cups to divert the child's focus of attention, but the child returns to engage in the object / activity interest ie. the toy train after mum has moved it to the side or away from the child. If Mum has not moved the object out of sight, that is it remains in front of the child, then it cannot be considered as a 'return' to the narrowed repetitive interest.
- The child may also be temporarily distracted but return to engage in play with this specific object.
- The child may insist on holding the object or keep it in close proximity. ie. the child may be playing with a toy telephone with one hand and with the other holding onto a toy train.

Repetitive Refusal / Non-compliance

- The child may continuously or repeatedly refuse to comply with the parent's request, for example Mum tries several strategies, but the child continues to shout 'no..' or 'help..' . The child may use different words to refuse their parent's request, thus it is the continued refusal, but perhaps through different methods which is coded.

Thresholds:

1. The child must initiate this repetitive narrowed interest, it should not originate from the parent ie. if the parent builds a tower and then causes it to fall down and the child copies this behaviour, it should not be considered repetitive; modelling is excluded
and
2. The child should engage in this narrowed interest on a second (or more) occasion and after a pause, ie. the child returns to the behaviour
or
3. The child engages in the narrowed interest continuously.

MARGINAL DECISIONS

The child is playing with a toy and repeatedly chooses the bear to pop up

The child then starts to growl like a bear

The child sings a song about a bear

This would be coded as a narrowed repetitive interest

2. Is the child expressing *specific or focused interest(s) with non functional parts of toy(s) or displaying unusual repetitive interest(s)?*

Guidelines

- This includes the child focussing on a certain component of a toy eg. the symbols in a tambourine and repeatedly playing with this part. The child may also play with the toy doors on a toy van / car, repeatedly opening and closing them.
- The child may repeatedly engage in this behaviour.
- The child may resist engaging with the suggested use of the toy itself eg. instead of pushing a toy car to see it go, the child may repeatedly spin the wheels or fiddle with the doors.

- Unusual repetitive interests may include the child focussing or repeatedly engaging with other objects in the room, eg. the legs of a chair or the door handle of a door, or the zip of the suitcase.
- The child may show little or no interest in engaging with the toys within the room or they may be temporarily distracted but return to engage in their specific interest.
- Or the child may repeatedly arrange objects in a specific way eg. line up the toy cars diagonally.

Thresholds:

1. The child must initiate this specific or unusual interest, it should not originate from the parent ie. modelling is excluded

and

2. The child should engage in this specific or focused interest on a second (or more) occasion and after a pause, ie. the child returns to the behaviour

or

3. The child engages in the focused interest continuously.

4. For unusual interests, eg. playing with the zip, coding should begin on the first observed occasion.

MARGINAL DECISIONS

3. Is the child expressing specific sensory interest(s)?

Guidelines

- The child may repeatedly engage in a behaviour to satisfy a particular sensory need
- Consider all 5 senses – they may occur individually or in combination
- Auditory –eg. making noise, the child may repeatedly scratch the top of an object and / or various objects to elicit a particular sound.
- Visual –unusually gazing which may for example indicate a visual interest in lights or peering in an unusual way eg. holding two cars at eye level and moving them sideways.
- Touch –unusually interested in the sensation of certain objects eg. unusually stroking hair with the back of hand or may repeatedly use their feet to play with the toy or rolling the toy car over the torso repeatedly
- Oral -the child may place the same toy or part of a toy in their mouth. The child may also place their fingers in their mouth.

Thresholds:

1. The child must initiate this specific sensory interest, it should not originate from the parent ie. modelling is excluded

and

2. The child should engage in this specific sensory interest on a second (or more) occasion and after a pause, ie. the child returns to the behaviour

or

3. The child engages in the focused interest continuously.

MARGINAL DECISIONS

The child shakes marbles in a jar and his body language indicates that an auditory interest is being met. For example the child may shake the jar close to his ear.

The child repeatedly blows raspberries. They may hold their hand up against their mouth to feel the sensation or place their finger on their cheeks, which would indicate an oral interest is being met. Repetition of certain phrases which clearly elicit an oral sensation eg. shhhh or brr brr, would also be coded.

4. Is the child *displaying unusual or repetitive motor movement(s)*?

Guidelines

- Unusual or repetitive movements include all areas of the body.
- Therefore the child may posture their fingers or hands unusually, may point, may rock their body, turn their shoulders inward, shudder, etc.
- Repetitive motor movements also include movements of the mouth, for example the child may blow out their cheeks repetitively
- They may also spin themselves or repeatedly run / walk in circles or spin in a circle whilst sitting.
- The child may also for example repeatedly roll the car backward and forward without looking at it. This may be considered a repetitive motor movement or imaginative play if not apparently sensory.

Thresholds:

1. The child must initiate this repetitive motor movement, it should not originate from the parent ie. modelling is excluded

and

2. Coding should begin when the child first engages in the unusual or repetitive motor movement

or

3. The child engages in the repetitive motor movement continuously.

MARGINAL DECISIONS

The child may cover their ears with backs of hands. There does not appear to be any sensory interest i.e. no unusual touching and therefore this would be coded as a repetitive motor movement.

The child may place both hands on the cheeks of their face and shudder. If there is no unusual oral movement or interest, i.e. they are not blowing raspberries, and then this would be coded as a repetitive motor movement.

Clapping (inappropriately)

Patting tummy with hands

Mouthing sounds without noise

Twiddling

Tapping

5. Is the child repeating unusual sound(s), word(s), repeating certain sentences or echoing?

Guidelines

- This may include the child repeating a specific unusual sound or particular word before, during at the end of sentences, for example ‘toot look.’
- The child may also engage in repeating specific sounds which are similar in pitch and intonation, it may be a scream for example or a specific sound.
- The child may also include repeating specific sentences or similar sentences, which are of a particular topic, for example, ‘is that the clock on the wall, that’s the clock on the wall.’ Or ‘all aboard the police car, all aboard’
- The child may also engage in echoing, for example the parent may say ‘John’s turn’ and the child may repeat the word ‘turn’

When the child repeats a phrase or questions, i.e. there is a clear word being repeated (a language) component, this would be coded as 5H. (H =equating to a higher level RB). This therefore differentiates between lower level sounds which would be coded as 5.

Thresholds:

1. The child must initiate this repetitive unusual sound / word / sentence, it should not originate from the parent ie. modelling is excluded

and

2. The child should engage in this repetitive or unusual sound on a second (or more) occasion and after a pause, ie. the child returns to the repetition

or

3. The child engages in the unusual sound or word continuously.

Repetition of sound nee naww nee naaww not considered repetitive if appropriate to context and occurs whilst child is playing with fire engine / ambulance / police car. If the child continuously returns to play with the fire engine / ambulance and repeats the associated sound then this would be considered a narrowed repetitive interest.

MARGINAL DECISIONS

Singing a song eg. twinkle twinkle little star but using the sounds gi gi gi gi or wa wa wa etc

Asking a question eg. “What was that” when there is no apparent noise or change

6. Combined

Guidelines

- This category should be considered when a number of different types of repetitive behaviour seem to occur together.
- For example the child may gaze up at the lights and an unusual sound may be elicited. It would be important to mark each type of repetitive behaviour separately and then mark combined.

Part B: Evaluating parent's response / management strategy

Consider: what does the parent do? consider all aspects- language, body movements, subtle cues eg. eye movements or hand gestures which may indicate the following:

Category 1: Passive – non intervening

It is important to note that passive non intervening can only be coded if it is clear that the parent is aware ie. they see the repetitive behaviour occurring and choose to engage in this strategy. The strategy cannot be used for coding if the parent does not see the repetitive behaviour

Examples:

1. No interference, the parent allows the child to carry on

The parent is aware of the repetitive behaviour but allows it to continue. There are no attempts to disengage or distract the child from the behaviour they are engaging in. Language tone and body gestures remain the same.

2. Parent does not seem to indicate that they consider the behaviour repetitive

The parent is unaware of the child's repetitive behaviour or interest. For example the child may carry the toy train around with them and there is no indication that the parent is aware of the behaviour. There are no obvious body mannerisms or gestures which would indicate that the parent is aware of what the child is doing.

Category 2: Active - preventing

Examples:

3. The parent tells the child to stop

The parent states that the child should stop the behaviour. Body language or cues such as pointing / hand gestures to the activity / object / behaviour may also occur. This management strategy is verbal only – the parent does not physically remove the child or object / activity. There may be a change in language tone or the parent may be very direct and brief with their statement.

4. The parent may threaten to remove a pleasurable activity or object

The parent may state that a future or current activity / object of pleasure will be removed or not occur. This management strategy is verbal only - the parent does not physically remove the child or pleasurable object / activity. There may be a change in language tone or the parent may be very direct and brief with their statement.

5. The parent may physically move the child away from the object / repetitive interest or behaviour or physically intervene in attempt to manage the behaviour

The parent may lift or move the child away from the situation and then may engage in another strategy. eg. distraction. The object / activity remains in place, this is not altered in any way. Where repetitive motor movements occur, the parent for example, may physically hold the child's arms or hands. The parent may also use verbal cues with this strategy, and offer an explanation of what is happening.. eg. parent lifts child and states 'we're going to do something else..'

6. The parent may physically remove the object / activity of interest.

The parent may remove the object / activity of interest. With objects, when the child is unaware, the parent may place these out of the child's sight ie. in a higher position. The child remains in the same place, there should be no attempt to move the child. The parent may also use verbal cues with this strategy, and offer an explanation of what is happening 'ok we're going to put that away now....'

Category 3: Active –engaging

This involves the parent predominantly engaging with what the child wants. They are essentially ‘doing the same.’

Examples:

7. Explanation of why / reasoning

The parent may explain to the child their reason for asking them to stop the repetitive behaviour / interest. This strategy therefore may typically follow the request for the child to stop. The parent may repeat this explanation in various different ways in an attempt to enable the child to understand.

8. Engaging with the child

The parent may engage with what the child is saying or their behaviour. For example, the child may repeatedly ask to leave, Mum may respond by stating, ‘ok, where do you want to be?’ or the child repeatedly asks for a hankie, mum may say ‘ok and then offers the child the hankie.’

9. The parent may imitate or model the child’s own repetitive behaviour(s) / interest

The parent may engage with the child in the repetitive behaviour to enable an interaction to occur. This strategy may be used temporarily, as the parent may engage with the repetitive behaviour / interest for a number of times or duration before attempting to move the child onto something else ie. which may be the overall aim of modelling or imitation. Where a child engages in expressing repetitive sounds / words / echoing, the parent may also join in the verbal ritual eg. imitating the noise.

10. Attempt to calm child down

The parent may hold the child in close proximity, rock the child or engage in other soothing behaviours to calm the child. They may also use a softer tone or repetitive language to calm the child eg. come on, calm down, that’s a boy, good..good,’ or offer the child a cuddle or offer them their hand or stroke their hair.

Category 4: Active – distracting / developing

Active distracting or developing effectively means moving the repetitive behaviour or doing something different.

11. The parent may attempt to distract the child – with object / activity

The parent may try to engage the child in another activity or object, this may be a new physical object within the room or may be reference to another topic. The parent may physically show the child other toys and use encouraging language or gestures to attempt to persuade the child to engage with this toy. The parent may also start to play with the distraction toy / object to capture the child's attention. There may be a change in the pitch and type of language, with parents perhaps engaging in a higher pitched tone and using sounds such as weeee or wow to distract the child.

The parent may also offer a child a choice of other activities / toys to engage in, this may be with or without verbal prompts.

The parent may make a noise, for example tapping on the blocks to capture the child's attention and engage them in something else.

The parent may say look look, and place an object directly into the child's gaze, or they may tap the child on their arm / nose – lift their chin or touch their arm or say their name and then show them the object.

It is important to note that these distraction objects / activities are new or different.

12. The parent may attempt to distract the child – through social cues

The parent may try to intrude the child's behaviour by exaggerating their movements, eg. flashing the child a large smile, or laughing. They predominantly use themselves to distract the child. They may use verbal and non-verbal cues to comment on their own / child's behaviour.

13. Develop behaviour into something more positive

The parent may use this strategy more so after modelling or imitation (see number 5). The parent will attempt to alter the repetitive behaviour or introduce a change to move the child on or away from the specific interest. The parent may use encouraging language or body movements in attempts to engage the child in the more positive behaviour. For example, the child may line up the cars repetitively and Mum may count the cars slowly. Or the child may use a toy object and stroke it on their head to elicit a sensory interest, Mum might say ' Oh you're brushing your hair.' Or the child may repeatedly ask Mum what the object is, Mum may attempt to develop the behaviour by stating 'that's a red and yellow ambulance.'

Part C: Evaluating the child's response

The child's response to the parent's management strategy should be considered. Observations of the child's language, overt behaviour, body gestures and mannerisms may indicate:

1. Positive parent child interaction

The main indication of a positive parent / child interaction will be that of joint attention.

Joint attention can be defined by "the ability to coordinate attention towards a social partner and an object of mutual interest" (Bakeman & Anderson, 1984). Joint attention may be understood through shared affect, shared intentions or attention. It would be important to think about enjoyment and the atmosphere of the interaction. Consider eye contact, facial expressions, affect, gesture, vocalisations eg. laughing.

Shared communications may also be indicative of a positive parent/ child interaction. This may include the child using expressive language, initiating communication with their parent or responding their parent's communications. However, echoing a parent's word, without eye contact is coded as (2) appropriate action.

2. Appropriate action – (not parent child interaction)

The child may engage with what the parent is suggesting but not offer any positive social response, for example they may engage with a toy offered for distraction but not look at their parent, play with them or express any type of shared interaction

3. No change, behaviour remains the same

*The child's repetitive behaviour or interest continues. They may or may not be aware of their parent's management strategies, however they continue to engage in their behaviour. The differentiation from (5) the child moves on of their own accord may be partly a matter of timing. (3) no change would be coded if the child continues for around 5 seconds after the parent management strategy.**

4. The child becomes distressed

The child may convey signs that they have become distressed by their parent's response / attempt to manage their behaviour. Their behaviour may escalate or they may cry or they may shout.

5. The child stops or moves on to something of their own accord

*The child moves on to play with another object. They have found something else to distract themselves with but are not engaging with their parents or offering any positive behaviour towards the parental management strategy. The repetitive behaviour stops. *(see (3) for differentiation principles.*

ID:																	
#	TIME (start &end)	Description of observed behaviour (brief)	RB TYPE						PARENT RESPONSE				CHILD OUTCOME				
			1	2	3	4	5	6	1	2	3	4	1	2	3	4	5
			Narrowed RI / RR	Specific Non Func	Sensory	Motor	Sounds / Words	Combined	Passive Non Int	Active Preventing	Active Engaging	Active Dis / Dev	+ Parent Child Int	Appr. Child Action	No Change	Child Distressed	Child stops on own
			1	2	3	4	5	6	1	2	3	4	1	2	3	4	5
1																	
2																	
3																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	
29																	
30																	
31																	
32																	

ID:																	
#	TIME (start &end)	Description of observed behaviour (brief)	RB TYPE						PARENT RESPONSE				CHILD OUTCOME				
			1	2	3	4	5	6	1	2	3	4	1	2	3	4	5
			Narrowed RI / RR	Specific Non Func	Sensory	Motor	Sounds / Words	Combined	Passive Non Int	Active Preventing	Active Engaging	Active Dis / Dev	+ Parent Child Int	Appr. Child Action	No Change	Child Distressed	Child stops on own
			1	2	3	4	5	6	1	2	3	4	1	2	3	4	5
33																	
34																	
35																	
36																	
37																	
38																	
39																	
40																	
41																	
42																	
43																	
44																	
45																	
46																	
47																	
48																	
49																	
50																	
51																	
52																	
53																	
54																	
55																	
56																	
57																	
58																	
59																	
60																	
61																	
62																	
63																	
64																	

RELIABILITY CHECK

For purposes of reliability, the second rater will be provided with time points of when the episode of repetitive behaviour begins (RB) as decided by the primary rater. The second rater will then go through this episode and assign the appropriate coding for:

- A: The category of repetitive behaviour (See Part A)
- B: Parental management / response strategy (See Part B)
- C: Child Outcome (See Part C)

The primary rater determines the timeframe of the episodes of RB as it was found difficult to achieve consistent agreement on exact timing of episodes, such as flapping or twiddling; where the behaviours were multiple and or continuous.

The definition of the beginning and end of an episode is essentially a matter of judgement. The following principles have been generated and used as guidelines by the primary rater when determining the timeframes of episodes: