

THE FAMILY OBSERVATION SCHEDULE (FOS)

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INTRODUCTION

The Family Observation Schedule (FOS) is a coding system used for evaluating interaction styles within the family. It is designed particularly for research involving children aged between 1 to 12 years of age, but can be modified for use with older children. This manual defines and describes the Family Observation Schedule. It begins with defining each code and giving examples of behaviour that would be scored as the particular code. The manual continues to provide all of the information a researcher will require to use the coding system within a research project.

There are 3 affect codes that can be used in addition to the basic FOS codes. These are described and defined within the last sections of this manual.

When coding video tapes or doing live observation, it is important to consider not only the content of the subject's speech, but also their voice tone, pitch, overall affect, and physical behaviour. These considerations can affect whether an utterance is coded in one category or another.

Behaviour categories are scored for their presence in a particular interval, but not for the frequency of occurrence within an interval.

Please note, that the terms non-aversive and positive are interchangeable as are aversive and negative for ease of explaining the codes. It is important to note aversive and non-aversive are the actual correct definitional terms to be used when trying to understand the code.

DEFINITIONS OF PARENT BEHAVIOUR CATEGORIES

Each parent behaviour code is defined in this section. Examples of each category are provided for clarity.

PRAISE (PR)

This category is scored for any praise comment directed to the child. It must be a positive verbal description of a specific behaviour or child characteristic, or a positive global reference to the child. It must be non-aversive. Sometimes praise may be in the form of a question or a statement reinforcing a child for appropriate behaviour.

Examples of praise include:

- "You're a good girl." PR AF
- "What lovely hair you have." PR AF
- "You're good at that, aren't you?" PR AF
- "Aren't you eating well?" PR AF
- "Good" (when child spells word correctly). PR AF
- "Thank you for picking that up off the floor." PR AF

Any comment coded as praise must also be coded as affection (see AF - affection code).

CONTACT (CO)

Contact is scored whenever the parent makes physical contact with the child, that is, the contact is parent-initiated or parent-maintained.

The coder must decide whether this contact is aversive or not. Positive contact is that which occurs in a friendly, affectionate, or neutral manner. Aversive contact is scored whenever the parent makes physical contact with the child that could or does cause pain or discomfort.

Examples of non-aversive contact include:

- The parent hugs, pats or kisses the child. CO+ AF
- The parent holds the child's hand, ruffles their hair, puts an arm around them or dresses them. CO+ AF
- The parent leans into or up against the child while doing a joint activity or during conversation. CO+ AF
- The parent guides the child's hand away in a non-aversive manner, after instructing the child not to touch a particular item. CO+
- The parent guides the child's hand while cutting up food. CO+
- The parent instructs the child to establish contact and the child complies. CO+ AF
- The parent brushes the child's hair. CO+

Contact should not be scored when the child initiates and/or maintains physical contact toward the parent (e.g., child leans up against parent while doing an activity, and the parent does not reciprocate) unless the child has been instructed to do so.

Examples of aversive contact include:

- The parent hits, slaps or pushes the child. CO-
- The parent forcibly moves the child in a way that could or does cause discomfort. CO-
- Parent accidentally bumps or knocks the child. CO-
- Parent hits child with a magazine or other object. CO-

INSTRUCTIONS

Instructions are direct or indirect verbal commands that are used to initiate change in the child's behaviour. The coder should first decide whether the instruction is specific or vague. The coder then needs to decide whether the instruction is aversive or non-aversive.

Instructions are coded as aversive if they involve humiliating the child, sarcasm, or if the parent has an angry, abrupt, or annoyed tone of voice. When instructions do not include any of these characteristics they are coded non-aversive.

Specific Instructions (SI)

For an utterance to be coded as a specific instruction, it must have two properties. Firstly, there is a clear behavioural referent. This means that it is clear to the child what behaviour or set of behaviours they are expected to engage in. Secondly, the form of the instruction is direct and clear. A specific instruction is not in the form of a question and it is clear to the child that they are expected to comply. A specific instruction should not be coded when there is doubt as to whether the instruction is direct and/or has a clear behavioural referent.

It is important to consider the context/environment the instruction is delivered in to determine whether it is specific or vague. In some cases it is the situation which may determine whether the instruction is vague or specific. These considerations are especially important when parent and child are doing a joint activity such as a puzzle or colouring in.

Non-aversive Specific Instruction (SI+)

This category is scored for any direct verbal command that is clear, has a specific behavioural referent and is presented non-aversively.

Examples of non-aversive specific instruction include:

- "Go outside and play." SI+
- "Look." (as parent holds picture or points at something) SI+
- "Sam, come here and sit with me." SI+
- "Come away from the television, darling." SI+ AF
- "Draw along there." (parent points as child is doing a dot to dot) SI+
- "Dinner's ready, come and sit at the table" SI+
- "Stop swinging on your chair" SI+

Aversive Specific Instruction (SI-)

This code is scored for any verbal command that is clear, direct, that has a specific behavioural referent, but is presented aversively.

Examples of aversive specific instructions include:

- "Stop shuffling your feet." (annoyed tone) SI-
- "Don't hit your brother, you naughty boy." (yelled) SI-
- "Stop playing with your food like a baby!" SI-
- "I've already told you, come and sit at the table!" (yelled) SI-

Vague Instructions (VI)

When an instruction does not meet the two properties of a specific instruction, it is a vague instruction. Firstly, vague instructions often do not contain a clear behavioural referent. This means that there is no description of the behaviour or set of behaviours the child is expected to engage in, or the description is unclear or vague. Secondly, vague instructions are often indirect and phrased as questions. In this case it may not be clear to the child whether the parent is requesting information or wanting the child to engage in a behaviour or set of behaviours. Questions that are coded as vague instructions have an implicit message for the child to comply with the instruction.

Examples of non-aversive vague instructions include:

- "Come on, it's time for your bath now." VI+
- "Johnnnn." VI+
- "How about we pack these things up?" VI+
- "Play with your toys, okay?" VI+
- "Why don't you try some carrot?" VI+
- "Don't do that." (as child rocks on chair) VI+
- "Hurry up." (as child puts toys away) VI+
- "Why don't you dress up your doll" VI+
- "I would like you to sit down next to me" VI+
- "I think it would be good if you ate some of your sandwich" VI+
- "See, tomato tastes yummy" (implicit instruction for child to taste it)

Aversive Vague instruction (VI-)

This code is used for any verbal command that is unclear, that lacks a specific behavioural referent, and is presented aversively.

Examples of aversive vague instructions include:

- "Don't!" (angry tone) VI-
- "If you don't do what I ask, I'll put your toys away" VI-
- "Stop being stupid." VI-
- "I told you not to do that again!" (yelled) VI-

SOCIAL ATTENTION (SA)

Social Attention is scored for any verbal or non-verbal attention the parent gives to the child that cannot be scored under any other categories. It includes both parent attention and responses to the child (ie. it may be parent initiated or in response to the child).

The coder must decide whether social attention is aversive or non-aversive. If you code SA+, the only other code that can be scored for that interval is AF or SA-.

Examples of non-aversive SA include:

- Parent says "no" to child's question. SA+
- Parent says "This is a fun game, Joe." SA+
- Parent smiles, nods, winks at child. SA+ AF
- Parent watches child play with a game. SA+
- Engaging in general conversation with child. SA+
- Watching the child eat SA+

Aversive Social Attention (SA-)

Aversive SA is characterised by unpleasant, sarcastic, or abrupt voice tone, or by negative physical behaviour (which is not negative physical contact).

Examples of aversive SA include:

- Parent looks at child with contempt. SA-
- Parent mimics child. SA-
- Parent says "You're terrible at that puzzle." SA-
- "What have you done now?" (in an irritated tone of voice) SA-

AFFECTION

This category is coded for any instance of verbal or non-verbal affection directed towards the child. It includes affectionate words such as compliments, praise and statements that convey a message of love. It also refers to active affectionate physical contact (i.e., hugging, kissing, patting and playful wrestling), passive affectionate physical contact (i.e., leaning against child or having child sit on lap) and levelling (the parent sits, kneels, bends or crouches in a position which brings them closer to the height of the child). Child-initiated contact can only be coded as parental affection if it is reciprocated by the parent.

It is important to note that this code is not mutually exclusive and will always be coded in addition to another behaviour code for the parent.

Examples of affection include:

- Parent hugs and kisses child. AF and CO+
- Parent smiles at child. AF and SA+
- Parent praises the child. AF and PR
- Parent says "Sit down here, darling." AF and SI+

DEFINITIONS OF CHILD BEHAVIOUR CATEGORIES

Each child behaviour code is defined in this section. Examples of each category are provided for clarity.

NON-COMPLIANCE (NC)

This is coded when a child does not follow a specific or vague instruction given by the parents or another adult present. It is scored for each interval of non-compliance following an instruction given by an adult and is scored for each subsequent interval until either a new instruction is given or the setting changes. Once an instruction has been given, the child has five seconds to comply. If the child does not follow the instruction within five seconds, they are coded as non-compliant.

The ruling regarding the five seconds does not apply when the child gives a direct verbal response to the parent informing them that they will not follow the parents instruction. In this case the child is scored as non-compliant immediately.

It is important to recognise that a child may not demonstrate non-compliance until sometime after an instruction is delivered. This is particularly the case when a child is asked not to touch something and then three minutes later touches it. In this case, even though there was no immediate preceding instruction, the child is still scored as being non-compliant.

Examples of non-compliance include:

- Parent says "Tommy, pick up your toys please." At this point, Tommy has five seconds to comply. If Tommy fails to pick up the toys, he will receive a NC code for this and every other subsequent interval until parent says "Tommy, since you will not do as I ask, go and sit in your chair for three minutes" (new instruction) or parent sighs, and picks up the toys themselves (change of setting, the child can no longer comply with the instruction).
- Child continues to touch the television after he/she has been told not to (in this case the child does not have five seconds to comply, he/she is scored as NC each time they touch the television). NC
- Child ignores parent's instruction to stop playing and come for dinner. NC
- Child asks parent if he/she can move the chair and parent says "no", then child moves chair regardless. NC
- Parent asks child to put his toys away and child responds "No!" (in this case there is no five seconds to allow the child to comply, they get an instant NC code).

COMPLAINT (CP)

This is scored for any instance of whining, crying, screaming, shouting, grizzling, intelligible vocal protests or displays of temper. These behaviours may also be simultaneously scored as non-compliance if they violate an instruction. Do not score complaint if the verbal utterance is an aversive demand.

Examples of complaints include:

- "No!" (yelled) CP
- "I want a drink." (whine) CP
- "I hate this game." (verbal protest) CP
- "I don't want to sit on the chair." (yelled) CP

AVERSIVE DEMAND (AD)

An aversive demand is coded for any instruction, command, or demand directed to another person by the child in an aversive manner. It must be judged to be aversive or unpleasant because of the actual verbal content, the voice tone, and/or the assertiveness or aggressiveness of the child. The demand must refer to or infer a specific act of compliance the child would like the other person to engage in.

Examples of aversive demands include:

- "Get me a drink mummy!" (yelled) AD
- "Get out of my way or else!" (yelled) AD
- "Mummy look at me!" (whined) AD
- "Mum, you have to help me in this game!" AD
- "You can't do that!" (yelled) AD
- "Let me out of this chair" (whined) AD

Comments that refer to a child's wants or needs would be coded as a complaint rather than an aversive demand (e.g., I need my teddy).

PHYSICAL NEGATIVE (PN)

Physical negative is coded for any actual or threatened physical attack on an object or another person.

Examples of physical negatives include:

- Punching, kicking, biting, pinching another person. PN
- Throwing an object at another person. PN
- Child attempts to hit another person and misses. PN
- Smashing or throwing toys on the floor or wall. PN

Do not score physical negative if the game the child is playing involves throwing an object (e.g., ball) and it accidentally hits something.

OPPOSITIONAL (OP)

Oppositional behaviour refers to any inappropriate child behaviour that can not be categorised readily into any other deviant behaviour category. It is scored when a child demonstrates behaviour that is socially unacceptable or inappropriate. It is scored for any instance of violating specific family rules that may be imposed but which do not involve a direct instruction from the parent. Consequently, this category sometimes requires the observer to know any specific rules in a family, and to judge whether the observed behaviour is mock or playful.

Additionally, the coder needs to consider the age of the child, and make a judgement as to whether a behaviour is age appropriate or not. This category is exclusive, and no other child behaviour can be coded when OP is coded.

Examples of oppositional behaviour include:

- Child pulls a face at another person. OP
- Child sits or walks on top of furniture. OP
- Child ignores another person or does not answer question. OP
- Child says repeatedly "Barry's a chicken." OP
- When eating, child places too much food in their mouth, eats with their fingers or talks with mouth full. OP
- Throwing food. OP
- Child picks nose. OP
- Child does rude finger signing to another person. OP

- Child touches themselves or others inappropriately. OP
- Child stamps their feet. OP

Do not score the same behaviour as oppositional and non-compliant. If the child demonstrates a socially inappropriate behaviour (e.g., picking nose) they are scored as oppositional for that interval; if the parent then gives an instruction for the child to stop the behaviour (i.e., picking nose) and the child continues with this behaviour, then the child's behaviour is no longer coded as oppositional but as non-compliant. The one behaviour cannot be coded as both NC and OP.

INTERRUPT (INT)

This is scored when the parent is engaged in conversation with another person (adult or child), and the target child interrupts or attempts to interrupt in an intrusive, loud, annoying, abrupt, inappropriate or disruptive way. It is also scored if the target child interrupts the parent as the parent is talking to the target child (i.e., if the target child attempts to talk over the top of the parent).

Examples of interrupt include:

- Child commences talking to parent or pulling parents clothing to get attention whilst parent is still talking or listening to another person.
- Child starts banging a toy loudly against wall.
- Child starts talking to themselves or singing out loudly.

For the second and third example, the child must be within conversational range of the parent, i.e., the child must be within four feet (1.5m) of the parent, and demonstrating the behaviours. If the child demonstrates these behaviours and is more than four feet (1.5m) away from the parent, they are scored with another code, e.g., oppositional. Do not code interrupt if child excuses themselves or at least attempted to before attempting to gain parents attention.

APPROPRIATE VERBAL INTERACTIONS (AV)

This category is scored for a full interval of non-aversive activity, in which intelligible speech/verbalisation/vocalisation on the part of the child occurs, either directed to his/her parents, siblings, pet or to self. Any slang used by the child may also be considered as appropriate verbal. This category is exclusive and may not be scored if NC, CP, AD, PN, OP, INT, or EA is coded within the same interval.

Examples of AV include:

- Child asks "What's for tea mum?"
- Child sings Humpty-Dumpty while playing with toys.
- Child tells parent about their day at kindy.
- Child says "Umm" or "Yeah".
- Involvement in conversation at the table.
- Non-aversive demands (e.g., "Can I have some milk please?")

ENGAGED ACTIVITY OR PLAY (EA)

This is scored for a full interval of non-deviant behaviour during which the child does not produce any intelligible verbalisation or vocalisation. This category is exclusive and may not be scored if NC, CP, AD, PN, OP, INT, or AV is coded within the same interval.

Examples of AE include:

- Child complies with instruction, plays with toys, draws pictures and plays games for the full interval.
- Child looks at objects, people, or activities for full interval.
- Child eats food for the full interval.
- Watching a parent prepare food and place it on the table.
- Listening to conversation at the table.

AFFECTION

Affection is coded for any verbal or non-verbal affection directed towards the parent or sibling. Like the parent code, this includes affectionate words such as compliments and statements that convey a message of love or friendship, active affectionate physical contact and passive affectionate physical contact. Parent-initiated contact may only be coded as child affection if it is reciprocated by the child.

Examples of affection include:

- Child hugs parent. AF and AE
- Child says "I love you." AF and AV
- Child smiles at parent. AF and AE
- Child laughs at parent. AF and AV

GENERAL CODING RULES

1. Child and Parent Codes

- 1.1 If you code SA+, the only other code that can be scored for that interval is AF or SA-. SA- can be coded in addition to all other aversive and non-aversive codes.
- 1.2 If you code AE or AV, the only other code that can be scored for that interval is AF. AE and AV cannot both be coded in the same interval.

2. Uncodeable Intervals

- 2.1 If the coder cannot hear or see the parent (e.g., parent has moved to another room), the interval is uncodeable and this should be indicated for that interval. Usually 'blank' is written for that interval.
- 2.2 For children, rule 2.1 applies unless this occurs because the child is following the parent's instruction (e.g., parent asks child to go to their bedroom and get a particular toy). In which case although the child can not be seen or heard, they are engaging in the appropriate behaviour (AE).
- 2.3 If the coder can hear the parent but not see the parent, the parent speech must be coded.
- 2.4 If the parent can be seen and heard, but does not look at child or talk to child for an entire interval "No Interaction" (NI) is written for that interval (e.g., when parent is reading a book or attending to another child).

3. Behaviours for which codes may and may not overlap

- 3.1 For children, a verbal refusal to follow an instruction may be coded as both non-compliant and complaint (if the tone is whinging or angry).
- 3.2 For children, a single utterance cannot simultaneously be coded as an aversive demand and a complaint. If the utterance meets the criteria for an aversive demand, it is coded as such and is not scored as a complaint.
- 3.3 For children, if a behaviour is scored as oppositional, the behaviour cannot be scored as anything else. If the behaviour meets the criteria for any other aversive behaviour (e.g., complaint, physical negative, non-compliant) it must be coded as such and not as oppositional. If the child demonstrates an oppositional behaviour such as picking nose, it is coded as OP until the parent gives the child an instruction to stop, if the behaviour continues it is coded thereafter as non-compliant.

4. Scoring across intervals

- 4.1 Verbal utterances or behaviours which occur across intervals are scored in both intervals. For example, if the parent begins speaking an instruction at 8 seconds (first interval) and does not complete it until 12 seconds (second interval), then specific instruction is scored as occurring in both the first and second interval.

5. Incomplete Utterances

- 5.1 If a parent only speaks the first part of an utterance, do not code it. A coder cannot assume they would know how the utterance would be completed. (e.g., "Honey, please pick up.....pardon").
- 5.2 When coding AV for children, it does not matter whether the child finishes the utterance since all the coder requires is a single intelligible verbalisation to score AV.

6. Unintelligible Utterances

- 6.1 If a parent's speech is unintelligible for an entire interval, write blank for that interval. However, if a child's speech is unintelligible, it can usually be coded as AV, unless it is deemed to be aversive. To decide that parent's speech is unintelligible, the interval must be reviewed only 3 times.

Table 1. SUMMARY TABLE OF BEHAVIOUR CODES

PARENT CODES	
PR	A positive description of a child's behaviour or characteristic, or positive global reference to the child.
CO+	Parent physically touches child in a non-aversive manner.
CO-	Parent physically touches child in an aversive manner.
SI+	A non-aversive instruction that implies the child should change their behaviour. It is direct and has a clear behavioural referent.
SI-	An aversive instruction that implies the child should change their behaviour. It is direct and has a clear behavioural referent.
VI+	A non-aversive instruction that implies the child should change activity but is not direct or has no clear behavioural referent.
VI-	An aversive instruction that implies the child should change activity but is not direct or has no clear behavioural referent.
SA+	Parent gives positive (non-aversive) attention (verbal or non-verbal) to the child that cannot be coded elsewhere.
SA-	Parent gives negative (aversive) attention (verbal or non-verbal) to the child that cannot be coded elsewhere.
INT	Parent abruptly disengages from conversation with another person to attend to the child.
CHILD CODES	
NC	Child fails to comply with parent's instruction.
CO	Child whinges, cries, screams, grizzles, shouts, or makes a verbal protest.
AD	Child makes/gives an instruction, demand, or command in an aversive manner.
PN	Child demonstrates an actual or threatened physical attack on another person or object.
OP	Display of inappropriate social behaviour not codeable elsewhere.
INT	When child inappropriately interrupts parent while parent is engaged in conversation.
AV	When child displays non-deviant activity and is uttering intelligible verbalizations.
EA	Child displays non-deviant activity but does not display intelligible verbalizations.

ADDITIONAL CODES

Sometimes a researcher may wish to use further information from the observational measures. For example, in one of our projects we were observing how depressed mothers interact with their child. In this project we were interested in looking at the mothers' affect in addition to the behavioural events. This section introduces the affect codes we developed to use in conjunction with the FOS.

AFFECT CODES

There are two affect codes. These codes are based on non-verbal behaviour. Therefore affect should never be coded, for example, on speech content. The two codes are not mutually exclusive, that is, a person may be scored with both affect codes in the one interval. The codes are applicable for coding both parent and child affect.

Depressed Affect

Depressed affect is usually scored for an interval when the observer detects a number of behaviours which indicate depressed mood. This may be a transient (present for only one or a few intervals) or global (present throughout most of the intervals) mood state.

Below is a table of behaviours which are split into three categories; face, voice, and body posture. In order to score depressed affect the person must demonstrate any two combinations of behaviour.

- e.g. 1 face behaviour + 1 body posture behaviour and/or 1 voice behaviour (e.g., downturned mouth + crying + hangs head).
- e.g. 1 body posture behaviour + 1 face behaviour (e.g., body oriented away from other person + downcast eyes).

Depressed affect should not be scored when only one behaviour occurs during the interval (e.g., eyes downturned).

FACE	VOICE	BODY POSTURE
Downcast eyes	change in pitch (usually	orientation away
Lowering eyebrows	audible to quiet)	withdrawn
Downturned mouth	afraid	moving away and not facing
Turns face down	lamenting	others
Frowning the forehead	depressed	hangs head
	crying	cups face in hands
	tremor	rests face on hands
	mournful	covers face with hands
	morose	slumped body posture
	whining	
	deep sighing	

Angry and/or Hostile

Angry/hostile affect is usually scored for an interval when the observer detects a number of behaviours which indicate angry or hostile mood. This may be a transient (present for only one or a few intervals) or global (present throughout most of the intervals) mood state.

Below is a table of behaviours which are split into three categories; face, voice, and body posture. In order to score angry/hostile affect the person must demonstrate any two combinations of behaviour.

- e.g. 1 face behaviour + 1 body posture behaviour and/or 1 voice behaviour (e.g. sneering + change in pitch + clenched hands).
- e.g. 1 body posture behaviour + 1 face behaviour (e.g., abrupt and cutting gesture + demonstrative looking away).
- Angry/hostile affect should not be scored when only one behaviour occurs during the interval (e.g., frowning of forehead).

FACE	VOICE	BODY POSTURE
Mocking Sneering Frowning of forehead Expression of disgust Demonstrative looking Away	change in pitch (usually quiet to loud) cold tense impatient tough piercing staccato accusing sarcastic outraged screaming scornful laugh	tense clenched hands abrupt and cutting off gesture (e.g. quick shrugging of shoulders). moving hands/feet tensely passive aggressive blocking off threatening arm position harsh/rude gestures tense neck

AFFECT CODES AND FOS CODES

It is worth mentioning how the affect and FOS codes occur together. Affect codes will often occur with speech content reflective of the mood. For example, a child demonstrating angry/hostile affect will also make an utterance which is nasty and unpleasant. Similarly, a child demonstrating depressed affect will also make an utterance which is whining. In the first case, the child is scored as having angry/hostile affect and a complaint, in the later case, depressed affect and complaint. Usually when a child is scored with a complaint, they are also demonstrating angry/hostile or depressed affect. Similarly, when physical negative is scored (e.g., child breaking or attempting to cause harm to things or people) the child is usually demonstrating an angry/hostile affect.

CODING RULES WHEN USING AFFECT CODES

When using affect codes there are only a few rules the coder must consider.

1. Affect codes always occur independently of behaviour codes, and should be considered as such by the coder. That is, regardless of the behaviour codes that are scored, affect may occur.
2. There are no behaviour codes which are mutually exclusive to the affect codes, for example, depressed affect may be scored with negative social attention.

NON-INTERACTION CODE

The non-interaction code can be incorporated in the coding system and is used to code behaviour when the child population you are observing may engage in persistent ritualistic behaviour.