MODIFIED ALARM DISTRESS
BABY SCALE (M-ADBB)

Manual

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Note: For ease of reading we refer to the infant as ‘he’ throughout this manual.

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1. Overview
This observer-rated scale is derived from the full Alarm Distress Baby Scale (ADBB; Guedeney & Fermanian, 2001). The manual and background information for this full scale can be found on the ADBB web site: www.adbb.net. As with this Full scale, the M-ADBB is an assessment guide to help clinicians detect infants who have withdrawn social behaviour during a routine assessment. Social withdrawal in infants can be a symptom of various conditions, including: socio-emotional distress, physical illness, and developmental disorders. While the scale is suitable for infants aged 2-24 months, we (SM) have found 3 months to be the lowest age for which we feel confident rating the different behaviours.

The rationale behind developing this modified version is to produce a version of the scale that is likely to be easier for clinicians to use and score, which should therefore result in greater inter-rater reliability. Changes to the full version have been made based upon clinical and rating experience, and inspection of item score distributions. Early indications are that ‘novice’ users find the M-ADBB an easier instrument.

2. Items
The full ADBB has the 8 items that are listed below. The 5 items that are retained in the M-ADBB are marked with an asterix, and are described.

* 1. Facial expression
* 2. Eye contact
* 3. General level of activity
   4. Self-stimulating gestures
* 5. Vocalisations
   6. Briskness of response to stimulation
* 7. Ability to engage in a relationship
   8. Ability to attract and maintain attention

*Items retained in the M-ADBB.
2.1 Facial expression (towards anyone)
The observer assesses the extent of facial expressiveness throughout the examination. Crying is not included as a sign of facial expressiveness.

2.2 Eye contact (towards clinician only)
The observer assesses the nature of eye contact towards him/herself (clinician). As a rough ‘rule of thumb’, moderate eye contact means around 2 seconds; brief eye contact means about a second; and elusive or vague means less than a second.

2.3 Vocalisations (towards anyone)
The observer assesses the amount of vocalisation throughout the examination.

2.4 Activity (towards anyone)
Head, torso, and limb movement of the infant is assessed, both spontaneously and in response to pleasant or unpleasant stimulation [note: reaching out for an offered toy is responding to stimulation, not spontaneous activity]. Hand and finger activity are excluded when making this rating.

2.5 Relationship (towards clinician)
The observer assesses the infant’s ability to engage in a relationship with him/her, or with anyone present in the room other than the infant’s caretaker. Relationship is assessed through the infant’s attitude towards others, visual contact, and reaction to stimulation and interaction.

Note that the first letter of the five M-ADBB items gives the acronym ‘FEVAR’
(i.e. ‘fever’ slightly misspelt!). This acronym should help the clinician remember what behaviours he/she is assessing when involved in the session.
3. Scoring format and considerations

Items are rated using a three point scoring format:

- Satisfactory,
- Possible Problem,
- Definite Problem.

Note that the items Facial Expression, Vocalisation, and Activity are rated throughout the consultation. That is, inclusive of the infant’s interactions with the mother/caregiver. Conversely, Eye Contact and Relationship are only rated with reference to the clinician. For each item where an infant is rated as having a possible or definite problem, the rater also indicates whether this behaviour is different towards the parent or the clinician.

The scoring sheet (see Appendix 1) gives good descriptions for each of the three possible scores to enable the clinician to accurately decide which rating to give each behaviour.

In addition to these five items, the M-ADBB includes the external variables of clinician engagement and infant characteristics that may significantly impact on the social behaviour of the infant. Thus, if an infant appears withdrawn, but either the clinician has failed to try and engage him, or the infant is very tired or was distressed throughout the examination, these aspects should be taken into account when considering the possible implications of the infant’s behaviour as assessed on the M-ADBB. If either of these two factors is present (inadequate social stimulation, or distress in the infant) we would encourage a repeat examination at another time before concluding that the infant is socially withdrawn.

4. How and when to use the M-ADBB

Please refer to the Full ADBB manual for detailed information on this aspect.

In essence, any routine examination of the infant lends itself to assessing the infant’s social behaviour. It is important that the clinician attempt to socially engage the infant — by talking, smiling and touching him. The infant should also be given the chance to
become used to the situation – thus at least 10-15 minutes is required if one is assessing behaviour using the M-ADBB..

By keeping the acronym ‘FEVAR’ in mind, the clinician should be able to consider each of the 5 behaviours (Facial expression; Eye contact; Vocalisation; Activity; Relationship) as he/she conducts the routine examination. At the end of the appointment, the clinician should then spend a couple of minutes completing the M-ADBB, bearing in mind what he/she has observed over the entire session.

The clinician should also consider
a) for each item, if it is rated as a possible or definite problem, whether the infant displayed similar or different behaviour towards his carer.
b) at the end of the scoring sheet, decide on the level of engagement given to the infant, and the infant’s state during the session (e.g., tired / distressed).

If an infant appears withdrawn to the clinician, but demonstrates good social behaviour with his carer, this may be indicative of an infant displaying (appropriate) ‘wariness’.

5. Background to infant withdrawal behaviour

Please refer to the Full ADBB manual for details on this aspect.

In essence, these five behaviours are characteristics of withdrawn infants (as are the other three in the Full scale).

It is important to note that the ADBB does not provide any indication of why an infant is displaying withdrawn behaviour. Withdrawn social behaviour can be due to physical conditions and states (eg. tiredness, fever, dehydration, hearing or visual impairment); developmental issues (e.g. autism); or socio-emotional reasons (e.g. parental depression or other psychopathology; trauma). Users of the M-ADBB should not assume a socio-emotional aetiology for a given infant’s withdrawn behaviour.

As stated in Matthey et al (in press):

“While measurement of the infant’s temperament may have some overlap with his social behaviour, it is important to realise that these two constructs are separate. Temperament refers to the infant’s degree and style of responsiveness to varying internal and external stimuli (e.g., noise, heat, as well as social
stimuli), whereas social behaviour in infancy refers to degree and style of responsiveness just to social stimuli. Thus while an infant may, within temperament measures, be considered ‘shy’ or ‘slow to warm up to others’, he will still be responsive to the adult. A socially withdrawn infant however will lack many of the features of responsiveness to others”.

6. Identifying and managing withdrawn infants
Our clinical impression is that further assessment and/or intervention is warranted if an infant has 2 or more ‘possible’ problems; or 1 or more 'definite' problems on the M-ADBB. But please note this has yet to be empirically demonstrated. For further information regarding the Full ADBB cut-off scores see Guedeney and Fermanian (2001), and Matthey et al (in press).

If the infant appears withdrawn, the following steps may be useful:
1. Ideally, repeat the assessment in 2 weeks time.
2. Enquire from the carer whether this behaviour is typical for the infant (eg. “Is your baby usually chatty at home / with strangers?”; “would you say he’s a baby that easily smiles, or does it take a bit of coaxing to get a smile from him?”).
3. Enquire about the parents’ mood since the birth, or in recent times (e.g. not just with the Edinburgh Postnatal Depression Scale, as this only assesses the previous seven days), and about any recent stressors experienced by the family.
4. Consider the infant’s developmental progress.
5. If indicated refer to appropriate psychosocial and/or pediatric medical service for further assessment and intervention.

It is possible that some fairly low-key suggestions about how babies like to play with adults may be a good starting point to help the family, if the assessment indicates withdrawn behavior may be linked to decreased optimal social stimulation from others.

7. Psychometric information
The full ADBB has been shown to have good psychometric properties on a sample of 60 infants in France, aged between 2-24 months (Guedeney and Fermanian, 2001), and in other studies (Lopes, 2004; Matthey et al., in press). We also hope to be able to investigate the psychometric properties of the M-ADBB. Recently high scores on the Full ADBB (indicative of withdrawn behaviour) have been show to be associated with
less optimal interactive behaviours by both the mother and her infant in a Finnish study of 127 two-month-old infants (Puura, 2004), and in an Israeli study of 97 seven to 38 months old infants (Dollberg, 2004), while in an Australian study withdrawn infant behaviour was related to impaired mood in the mother since the birth (Matthey et al., in press).

8. Using the M-ADBB for research purposes
In order to use the Full ADBB or M-ADBB for research purposes investigators will need to undertake training and gain accreditation. This is to ensure that people using the Full or Modified ADBB are assessing the infant’s behaviour in a similar way (that is, raters are reliable).

Contact Dr. Stephen Matthey (e: stephen.matthey@swsahs.nsw.gov.au), or Prof. Antoine Guedeney (e: antoine.guedeney@bch.ap-hop-paris.fr) for information about this training.

9. References and further reading

Note: recommended references are marked with an asterix.


Symposium conducted at the meeting of the World Association for Infant Mental Health, Melbourne, Australia.


Appendix 1: M-ADBB SCALE  (v.11)
MATTHEY, RN EC, & GUEDENY (2005).
(Derived from the Full ADBB Scale: Guedeney & Fermanian, 2001).

Sydney South West Area Health Service, Sydney, Australia.

DATE: INFANT’S AGE: INFANT’S NAME:
EXAMINER: VENUE:

Each item is rated according to the following categories:
Satisfactory
Possible problem
Definite problem

This scale is best rated by the observer on the basis of his/her observations during the clinical interview. The clinician should try and socially engage the infant by smiling, chatting & touching him/her.

The rating is based on whether the infant demonstrates he/she has this behaviour in his/her repertoire throughout the examination – except for eye contact and relationship, which are rated only with reference to the infant’s behaviour towards the clinician.

Don’t rate any item if the infant spends nearly all the consult crying or is distressed.

1. FACIAL EXPRESSION: TOWARDS ANYONE
Observer assesses the extent of facial expressiveness throughout the examination. Do not include crying as a sign of facial expressiveness.

  Satisfactory: Face shows some clear expressiveness, whether positive (e.g. smiling) or negative (e.g. grimacing)
  Possible problem: Face shows limited expressiveness – but there is at least a hint of this (positive or negative).
  Definite problem: No facial expressiveness; face appears fixed, frozen, or ‘sad’ for the whole period.

If scored as a possible or definite problem, is this behaviour different towards the parent and the clinician?
-Yes, different  -No, not different  Describe:__________________________________________

2. EYE CONTACT: TOWARDS CLINICIAN / OBSERVER ONLY
Observer assesses the nature of eye contact towards him/herself (clinician). As a rough ‘rule of thumb’, moderate eye contact means around 2 seconds; brief eye contact means about a second; and elusive or vague means less than a second.

  Satisfactory: At least one episode of moderate duration eye contact together with several episodes of brief eye contact
  Possible problem: Only 2 brief eye contact episodes, or just 1 moderate episode
  Definite problem: If only 1 brief eye contact episode, or eye contact is vague, elusive or completely absent.

If scored as a possible or definite problem, is this behaviour different towards the parent and the clinician?
-Yes, different  -No, not different  Describe:__________________________________________
3. VOCALISATIONS: TOWARDS ANYONE
Observer assesses the amount of vocalisation expressing pleasure (cooing, laughing, babbling with consonant sounds, squealing with pleasure), but also lack of vocalisation expressing displeasure or pain (screaming or crying) throughout the examination.

**Satisfactory:** At least a few brief vocalisations (non-crying), or one or two long non-crying vocalisations.

**Possible problem:** Only a very few brief non-crying vocalisations; or if none of these, at least some screaming or crying in response to stimulation; or some substantial whimpers.

**Definite problem:** Infant only occasionally whimpers only in response to stimulation, or there is a total absence of vocalisation.

If scored as a possible or definite problem, is this behaviour different towards the parent and the clinician?
- Yes, different  - No, not different  Describe:_________________________________________

4. ACTIVITY: TOWARDS ANYONE
Assess head, torso, and limb movement of the infant without taking into account hands and fingers activity, both spontaneously and in response to pleasant or unpleasant stimulation [note: reaching out for an offered toy is responding to stimulation, not spontaneous activity].

**Satisfactory:** At least a moderate level of spontaneous activity, with a few head, torso, and limb motions.

**Possible problem:** Very reduced level of spontaneous activity, very few head and limb movements; but responds to stimulation.

**Definite problem:** No spontaneous activity, or very low level in response to stimulation.

If scored as a possible or definite problem, is this behaviour different towards the parent and the clinician?
- Yes, different  - No, not different  Describe:_________________________________________

5. RELATIONSHIP: TOWARDS CLINICIAN / OBSERVER ONLY
Observer assesses the infant’s ability to engage in a relationship with him/her, or with anyone present in the room other than the infant’s caretaker. Relationship is assessed through the infant’s attitude towards others, visual contact, and reaction to stimulation and interaction.

**Satisfactory:** Relationship at least moderately evident – either positive or negative

**Possible problem:** Relationship seems tenuous or doubtful, or only seems to be evident when the infant is crying, struggling etc.

**Definite problem:** No relationship evident – either positive or negative.

If scored as a possible or definite problem, is this behaviour different towards the parent and the clinician?
- Yes, different  - No, not different  Describe:_________________________________________

**CLINICIAN CHARACTERISTICS**
Makes a good attempt to engage infant (much smiling, talking to the infant)
Makes a fair attempt to engage infant (some smiling, talking to the infant)
Makes a below average attempt to engage infant (little smiling, talking to the infant)

**INFANT CHARACTERISTICS (that may affect the ratings)**
Infant appears to be tired
Infant appears to be distressed throughout the consultation
Other. Specify:________________________

**SUMMARY:** # Satisfactory:_____;    # Possible Problems:_____;    # Definite Problems:______