Babies Adaptive Behavior Inventory (BABI):

Observation and Conversations for Assessment of Newborns and Young Infants

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Overview

- Why do we need an age appropriate assessment of newborns and young infants?
- What is adaptive functioning and why is it important?
- How does adaptive function relate to regulation and socio-emotional development in newborns and young infants?
- Development of an instrument for newborns and young infants (the BABI)

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Why the Development of the Babies Adaptive Behavior Inventory (BABI) was Necessary for Newborns and Young Infants

– Current developmental evaluation measurements
  - May not address specific developmental organization in the newborn and young infant
  - Lack in predictive validity in current instruments for this age baby
  - Not easily administered in babies with regulatory difficulties
  - Have few measures appropriate for newborns and young infants

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What do we see by 3-4 months that reflects brain organization?

- Less spitting up, more regular breathing and pink color, more regular elimination
- Sleep bouts extend and become more predictable
- Writhing to fidgety motor development
- Cooing and smiling responsively
- Reflexive to volitional eating
- Reduction in crying/fussiness

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The Developmental Goal of the First Few Months is to become Regulated

O Greenspan Developmental Milestones by Age Groups, targeted on newborns and young infants

O Dynamic feedback model for the first four to five months

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Regulation: The Foundational Developmental Goal for Young Infants

- Relies on physiological, attentional, emotional and behavioral processes
- Refers to an individual's efforts to alter his or her inner states or responses
- Foundations are laid in the first several months after birth and are ongoing

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Regulatory Processes

- Are essential for cognitive, socioemotional, communication and adaptive development
- Can be challenging to support when infants are born with medical or prematurity issues
- Develop in the context of intimate relationships

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Adaptive Behavior Provides Insight into Regulation in Infancy

- **adaptive behaviors** are everyday living skills such as walking, talking, getting dressed, going to school, going to work, preparing a meal, cleaning the house
- skills that a person learns in the process of adapting to his/her surroundings.
- for the most part developmental
  - http://www.assessmentpsychology.com/adaptivebehavior.htm

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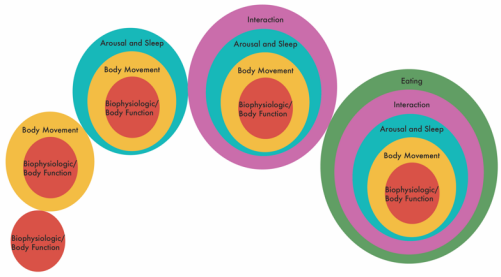
Adaptive Domains



Browne, 2018; Adapted from Als, H. (1984)
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Babies' Adaptive Behavior Inventory

- Theoretically grounded
- Based on the adaptive needs of newborns and young infants
- Uses the BABIES model as a framework
- Uses a format consistent with the Life Skills Progression instrument (Wollesen and Peifer, 2006)
- Uses the FIRST Observation skills, Caregiver Contributions, direct observation and structured interview
- Addresses regulatory issues for the newborn and young infant

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What is the BABI designed to do?

- Provide early intervention, clinic follow up and home visiting professionals a structured observation assessment to determine organization of six developmental domains.
- Address the six foundational domains for this age group that most assessments do not
- Guide professionals in supporting newborns and young infants and their families in foundational adaptation/regulation
- Based on the assumption that early adaptive/regulatory efforts underlie the transition from uterine to extrauterine environments.

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Who is the BABI designed for?

- Newborns and young infants up to about 6 months of age.
- Primary caregivers as they offer support to newborns and young infants
- Infants will "declare themselves" when ready to move on to other appropriate assessments.

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Who can use the BABI?

- Developed and validated by an interdisciplinary group of professionals with extensive clinical practice
- Professionals who support families in their transition from hospital to home and until they can be assessed on typical developmental assessments
- Those who have had basic training in the FIRST, BABIES and PreSTEPS model and/or the BABIES learning collaborative.

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What is the BABI training about?

- Provides a template for observation and a structured conversation with primary caregivers
- Provides professionals with guidance on how to observe six domains of newborn and young infant development
- Gives opportunities to identify and communicate "next steps"
- Is appropriate for adaptation to the IFSP

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What are the settings and resources for the BABI to be used?

- No special equipment
- With the caregiver
- In the home and/or clinic after the baby has come home from the hospital
- Materials (Copyrighted, not to be reproduced with out specific permission from the author)
  - BABI table
  - BABI score sheet
  - BABI note sheet
  - BABI structured conversation

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BABI Body Function (Biophysiologic organization)

Items	1	2	3	4	5
Breathing (Observation and Report)	Irregular breathing (<40 or >60 breaths per minute) almost all the time: breathing very fast when resting, pauses in breathing lasting ≥2 seconds, breathing is not steady (e.g. rapid breaths followed by pauses, sips of air, shallow breathing).	Breathing fast/irregular 50-75% of the time including rest and during interaction/activity.	Breathing fast/irregularly <50% of the time including rest and during interaction/activity.	Breathes fast/irregularly only when handled, paying attention, active, or engaged in social interaction.	Breaths evenly, smoothly, regularly and without too much effort (about 40-60 times a minute). No long pauses between breaths (more than 10-15 seconds) even when handled or during social interaction.
Other physiologic responses (Observation and Report)	Hiccoughing, gagging, sneezing, sighing, and/or yawning without apparent stressful or socially stimulating event or activity. These occur frequently and do not decrease with support.	Hiccoughs, gags, sneezes, sighs and/or yawns with interaction, activity, or stimulating event that stop gradually (<3 minutes) with support.	Hiccoughs, gags, sneezes, sighs, and yawns .with interaction that stop in one minute or less with support or withdrawal from the interaction.	Occasional hiccoughs, gags, sighs, and/or yawns which stop spontaneously unrelated to support or the stimulus in less than one minute.	Only occasional hiccoughs, sighs, yawns or gags in response to typical interactions as if to reset themselves OR these are not observed at all during the evaluation time.

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Arousal and Sleep

Items	1	2	3	4	5
Arousal and sleep states (calm alert, alert & focused, fussy or crying) and/or sleep states--deep, active, drowsy).	Diffuse states that are hard to define (e.g. lots of eye opening during active sleep; glassy-eyed alertness/inability to determine if awake or asleep).	Minimal definable sleep/wake states (less than 50% of the time) and are short in duration (typically less than 10 to 15 seconds).	States are clearly recognizable the majority of the time (>50%) lasting 10 to 15 seconds in duration.	Primarily definable states (>75%) of the time, states are clearly recognizable and last at least 15-30 seconds in duration.	The infant's state is easy to recognize These states last for at least 30-60 seconds longer in duration.
Appropriate state for situation	Infant is not in appropriate state for situation or moves to another state at inappropriate time (e.g. sleeps through feeding or screams/fusses during social interaction). Infant is unable to control or modulate response to incoming stimuli and appears "at the mercy" of incoming stimuli.	Infant is in appropriate state for the situation but quickly moves to an inappropriate state with incoming stimulation or fatigue, regardless of support (e.g. falls asleep soon after starting to eat).	Infant begins in an appropriate state, transitions to an inappropriate state and then returns to the appropriate state for a given situation and with support (e.g. falls asleep soon after start of eating, wakens with burping and stays awake to finish)	Infant is in appropriate clearly defined state for the situation the majority of the time without specific support (e.g. wakens on own to eat and stays awake for most of the feeding, falling asleep towards the end of feeding without parent stimulation).	Infant comes to alertness at appropriate time (e.g. before feeding, during social interaction, wakes up gradually). Falls asleep on his/her own when sleepy and can be put in bed and stay asleep for the expected amount of time

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Body Movement

Items	1	2	3	4	5
Posture and movement on back: Head	Head consistently turned to one side,	Head almost always turned to one side with attempts to move to midline.	Head often turned to one side. Beginning efforts to track a toy side to side and up and down	Head held in midline most of the time. Readily turns to each side to locate toys and people.	Head in midline. Readily moves head to explore with sight and hearing.
Hands and arms	Hands open or slightly fisted. Unstained efforts to bring hands to mouth.	Arms lying on the surface Hands slightly fisted or open	Some emerging midline. Arms flexed and up off of the surface. Can bring hands to mouth Hands open. Swipes toward object/toy.	Arms up off of the surface. Hands open. Controlled reach and grasp is emerging.	Arms up off surface, hands open and relaxed. Reaches for a toy and bring it to the mouth to explore
Movement	Movements occasionally jerky and tremulous, especially when stressed OR no movement unless stimulated by caregiver.	Movements generally smooth, and symmetrical, rarely jerky. Occasional tremulousness when handled or stressed.	Movements consistently smooth with good variety. Movements are less random and more controlled even during handling.	Movements are fluid and symmetrical. Are starting to be more goal- directed such as batting at toys or moving body to obtain an object out of reach.	Movements are smooth, controlled and the majority are intentional. Vision accurately guides reach and grasp, and persistence toward goals influences most movement

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Interaction with others (and Affect)

Items	1	2	3	4	5
Affect/facial expression	Consistent flat expression that does not change. Never frowns, smiles, grimaces, etc.	Rare subtle brightening or changes of expression once or twice during the observation.	Occasional (4-6) social smiles or frowns but these lack variability and appropriate flexibility with regard to the interaction.	Frequent smiles, frowns and subtle changes in facial expression (7+) during relaxed reciprocal social interactions.	Consistent clear and flexible expressions of happiness, sadness or puzzlement appropriate to the interaction.
Engagement with caregiver during routine activities such as feeding, diaper change	Does not show excitement, activity, looking toward or turning head to caregiver's attempts to engage with voice or touch.	Rare (1-3) subtle turns to caregiver's face, voice and/or touch. Brief (3-5 seconds) increases in activity. Appears uninterested in the interaction.	Several (4-6) looks toward, and turns head to caregiver's voice and touch. At other times shows no responsiveness. Initially increases motor activity during interaction, then diminishes without enthusiasm while attending.	Often (7+) looks toward caregiver and responds to voice and touch. Increases activity before interaction but then stills to attend during interaction.	Consistently looks toward, turns head to and increases activity before and when interacting with caregiver's voice, face and/or touch. "Demands" social interaction from familiar caregiver.

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Eating

DOMAIN	1	2	3	4	5
READINESS	Does not indicate hunger. Parents wake infant to feed.	Does not demand feeding or begin to suck without stimulation of reflexes.	Does not demand feeding, but willingly begins to suck when bottle or breast is offered.	Wakens and weakly demands feeding for a short time but then loses interest if not fed.	Indicates hunger when it is time to eat (e.g. shows arousal and eager behavior in anticipation of eating).
INITIATION	Actively resists feeding or food offered (e.g., back arching, crying, fussing, pulling away, etc.).	Opens mouth but does not initiate latch or sucking.	Opens mouth, initiates weak latch and sucking after significant stimulation and encouragement.	Roots toward breast or bottle. Needs some adjustment of his/her head/ body and/or touching of his/her face/body, but then latches and sucks.	Turns head toward a bottle or breast touching his face, opens mouth, grasps nipple and sucks vigorously.

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Soothing

Items	1	2	3	4	5
Use of self (e.g. fingers, hand, object to mouth; hand to face/head; clasps hands or feet together; grasping, holding, tucks in body, sucking behavior, braces foot/legs)	Makes no attempts to self-calm or soothe. Unable to calm down at all by self (within 20 minutes). Intervention always necessary.	Few (1-3 times) attempts to self-calm or soothe but attempts not maintained or successful.	Several attempts (4-6 times) to self-calm or soothe. One sustained successful quieting (≥15 seconds) but other attempts usually not maintained.	At least 2 prolonged (>10 seconds) and many brief (3-5 times) attempts to self-calm or soothe.	Consistent successful efforts to self-calm or soothe for sustained periods (at least 15 seconds or more).

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