# Regulatory Disorders

<table>
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<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
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</thead>
<tbody>
<tr>
<td>Hypersensitive</td>
<td>Under-reactive</td>
<td>Motorically Disorganized Impulsive</td>
<td>Other</td>
</tr>
</tbody>
</table>

- Fearful and cautious
- Withdrawn and difficult to engage
- Behavioral pattern
- Negative and defiant
- Self-absorbed
- Motor and sensory patterns
Regulatory Disorders

- Noise
- Light visual images
- Odors
- Tactile defensiveness
- Oral hypersensitivity
- Under-reactivity to touch or pain
- Temperature

- Gravitational insecurity

Sensory Sensorimotor Processing Difficulty

- Oral motor difficulty
- Poor muscle tone
- Muscle instability
- Poor motor planning
- Not modulate motor activity
- Def. fine motor skills
- Articulation problems
- Difficulties attention

- Visual/spatial problems
Regulatory Disorders

Regulation of

- Behavior
- Physiological processes
- Sensory processes
- Attentional processes
- Motor processes
- Affective processes

Organizing a calm state
or
Alert state
or
Affectively positive state
Regulatory Disorders

Distinct Behavioral Pattern

PLUS

Processing Difficulty
Sensory
Sensorimotor
Organizational

Affects daily adaptation, interaction or relationships
Regulatory Disorders

**Physiology state**
- breathing, gag
- hiccups, startle

**Attentional Organization**
- driven, not settle, or overfocused

**Affective Organization**
- predominant tone range, modulation

**Gross Motor Activity**

**Fine Motor Activity**

**Behavioral Organization**
- aggressive
- impulsive behavior

**Language**

**Cognitive Difficulties**

**Elimination**

**Sleep Patterns**

**Eating**
Regulatory Disorders

Underreactive Type

Withdrawn and difficult to engage
Disinterest in exploring
Appear withdrawn, apathetic easily exhausted. May appear delayed or depressed.
Repetitive sensory activity.
Underreactivity to sounds, mov.
Auditory-verbal processing probl.

Self-absorbed
Tune into own sensations, thought and emotions. Solitary exploration of objects. Appear inattentive, distracted. Escape into fantasy.
Imagination and creativity.
Decreased audit. processing.
May or may not other irregularity.
Regulatory Disorders

Motorically disorganized
impulsive

- Poor control of behavior, fearless
  - Crave sensory input. May be aggressive. Impulsive and disorganized. High motor activity. Seek contact through deep pressure, invades others’ space. Break things.
  - Poor motor planning.
  - Counterphobic behaviors.
  - Sensory underreactivity, crave motor discharge.

Other

- Motor or sensory processing difficulty
- Behavioral pattern not included in other descriptions
Regulatory Disorders

Hypersensitive Type

Fearful and cautious
Excessive caution, inhibition fearfulness
clinging in new situations
frightened, inh. exploration
easily upset, not soothe easily
not recover quickly
overreactive to touch, light
and noises, poor visuo spatial

Negative and defiant
Negativistic, controlling, stubborn
and defiant, prefers repetition
fussy, resist change.
Self around negative patterns
Avoid change.
Overreactive to touch and sound
avoid some textures, good visuo spatial. Poor audit. processing
Psychotherapeutic Approach

Floor time—Six steps

First  Foster engagement and a sense of connectedness

Second  Encourage a problem solving orientation through action or thoughts, practice and discussion

Third  Child experiences empathy toward him, and difficulties. Identify core assumptions

Fourth  Through small steps, master new experiences

Fifth  The adult establishes a structure, limits and incentives

Sixth  If limits set, increase processing time, follow child’s lead in setting limits
# Infant Crying

## If physically healthy

<table>
<thead>
<tr>
<th>Normal Crying</th>
<th>Difficult Temperament</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal</td>
<td>More difficult to soothe</td>
</tr>
<tr>
<td>Need of attention</td>
<td>Less rhythmic</td>
</tr>
<tr>
<td>Wet</td>
<td>Cry at night</td>
</tr>
<tr>
<td>Hunger</td>
<td>More frustrated</td>
</tr>
<tr>
<td>Bored</td>
<td></td>
</tr>
<tr>
<td>Wish for interaction</td>
<td></td>
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</tbody>
</table>

## Conditions

- **Colic**
  - Excessive Crying
  - Regulatory Disorders
    - Hypersensitive
    - Motor Processing Impulsive Motorically disorganized
Temperament

Transactional Model
Goodness of Fit
Biological Model

**Activity Level**
- intensity of reaction
- adaptability
- reaction to frustration

**Sociability**
- approach/withdrawal
- smiling, laughter
- fear
- soothability

**Attention Regulation**
- persistence, distractibility
- attention span

**Rhythmicity**
- Quality of mood

![Pie Chart]

- Difficult: 10%
- Easy: 40%
- Indifferent or average: 35%
- Slow to warm up: 15%
Excessive Crying

Definition and Relevance

- Wessel criteria—Duration over 3 hours in 24-hr. period, at least 3 days per week. (Cry Diary)
- Prevalence. Approx. 10% of infants in 1st year of life, open population
- Clinical concern. Consultation to manage intense or persistent, excessive crying
- Children at risk of maltreatment, physical abuse due to intractable crying
- Adds stressors, causes feelings of inadequacy and desperation in the parents
Differential Diagnosis of Excessive Crying

**Physical Illness**
- Cardiac illness
- Hernias (inguinal, others)
- Neurological condition. Hydrocephalus
- Visceral Hyperalgesia
- Others

**In Neonatal Period**
Most common causes:
- Cardiac illness
- Hernias (inguinal, others)
- Neurological condition. Hydrocephalus
- Visceral Hyperalgesia
- Others

**No Clear Physical Illness**
- Withdrawal from drugs exposed to in utero
- Cocaine, cannabis, alcohol. Amphetamines

*Withdrawal from antidepressants*
- Fluoxetine, tricyclics, chlorpamaine
II. Differential Diagnosis of Excessive Crying

Medical Illness
As above

Gastroesophageal Reflux
- Cry most if supine
- Cry during feedings due to esophagitis
- Frequent regurgitation of milk
- Dx: Ph probe, radiological study. Ecographic study.

Infant 6 weeks to 6 months old

Colic
- Onset at 6 weeks. Lasts up to six months.
- Starts in evening
- Gas in abdomen. Arch legs
- Pain. Self limiting.

Regulatory disorders

Allergy to milk
Rarely is the cause
Eosinophil count.

Parenting Problems

Long-term effects of street drugs
III. Differential Diagnosis of Excessive Crying

Infant from 6 months to 3 years of age

Medical illness ruled out

Regulatory Disorders
- Difficulty in maintaining calm state
- Hypersensitive to stimuli: Touch, sounds
- Visual stimuli
- Poor rhythmicity
- Poor ability to habituate
- Other types
  - Defiant and negative
  - Hyposensitive
- Multidisciplinary assessment
- Occupational therapy assessment

Relationship Disturbances-Disorders and Parenting Problem
- High parental stress
- Insensitive parenting
- Ignoring of cry
- Failure to soothe
- Inadequate stimulation
- Poor fit between child’s need and style of parents
- ? Advice of family physician and pediatrician regarding management of cry
# Management of Excessive-Persistent Crying

## If Medical Condition:

**Adequate diagnosis and treatment**, e.g., surgery, analgesics, shunt, etc.

## If Withdrawal from Drugs or Antidepressants

- Adequate diagnosis
- Minimal handling or stimulation of infant
- Soothing technique
- Containment (swaddling?)
- Possibly Sedatives, if tremor excessive startle convulsions

## If Gastro-Esophageal Reflux

- Thickening of infant formula
- Smaller and more frequent feedings
- Hold more in upright posture
- Increased carrying of infant
- Alkaline substances (Donnatal, etc.)
- ? Propulsid, accelerate gastric emptying

## If Colic

- Reassurance to parents
- Increased carrying of baby
- Soothing techniques may be useful
- Car ride
- Rhythmic stimulation
- ?-Anticholinergic medication
II. Management of Excessive-Persistent Crying

If Regulatory Disorder

- Become acquainted with infant’s sensitivities and aversion to stimuli, changes, etc.
- Taylor stimuli to child according to these
- Sensory integration techniques
- Empathic responsiveness given uniqueness
- Reduce overstimulation

“Floor Time”

- Increase positive pleasurable interactions
- Parent infant psychotherapy

If Relationship Disorder or Parenting Problems

- Alleviate stress if possible, increase support to parents
- Concrete advice and help to manage crying
- Model empathic responses and sensitivity vis a vis infant
- Interactive guidance
- Explore fantasmatic interactions
- Explore parents’ working model of child, and of relationships in general
Classification of Relationship Disorders

Parent-Infant Relationship (or caregiver)
Disorder Specific to a Relationship

- Parent's Perceptions
- Parent's Attitudes
- Parent's Behaviors

- Child's Perceptions
- Child's Attitudes
- Child's Behaviors

Observed behavior + Parent’s subjective experience of child.

- Perturbation
- Intensity of disturbance or distortion
- Disturbance
- Frequency of disturbance
- Disorder
- Duration of disturbance
Parent Infant Relationship Global Assessment Scale (PIR-GAS)

(Rating below 40 is for disordered relationship, severely disordered or grossly impaired relationship)

Behavior problems are intense, persistent and ongoing.

Qualities of Relationship

Behavioral qualities of interaction  (required for dx)
Affective tone
Psychological involvement
# Relationship Disorders

<table>
<thead>
<tr>
<th>Parent</th>
<th>Behavioral Quality</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity-insensitivity</td>
<td></td>
<td>Averting</td>
</tr>
<tr>
<td>Contingent-non contingent</td>
<td></td>
<td>Avoiding</td>
</tr>
<tr>
<td>Genuineness</td>
<td></td>
<td>Arching</td>
</tr>
<tr>
<td>Regulation</td>
<td></td>
<td>Lethargy</td>
</tr>
<tr>
<td>Predictability</td>
<td></td>
<td>Nonresponsiveness</td>
</tr>
<tr>
<td>Structuring and mediating</td>
<td></td>
<td>Defiance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delays</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parent</th>
<th>Affective Tone</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intense anxious</td>
<td></td>
<td>Intense, anxious</td>
</tr>
<tr>
<td>Tense</td>
<td></td>
<td>tense</td>
</tr>
<tr>
<td>Negative affect (irritable, angry, hostile)</td>
<td>dysregulating</td>
<td>Negative affect</td>
</tr>
<tr>
<td></td>
<td>effect</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Parent</th>
<th>Psychological Involvement</th>
<th>Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes and perceptions of the child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Meaning of child behavior to parents)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental image of a caregiving relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past experiences in the parents</td>
<td></td>
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</tbody>
</table>
**Relationship Disorders**

**Anxious and Tense Relationship Disorder**

Interactions are tense, constricted, no sense of relaxed enjoyment or mutuality. Clinician perceives anxiety, tension.

**Quality of interaction**
- Sensitivity to cues by parent is extremely heightened
- Parent concerned freq. re: infant well being, behavior, development may be overprotective
- Physical handling, tense, awkward
- May have negative interactions but not primary
- Poor fit between infant’s temperament and activity level and that of parents
- Infant may be very compliant or anxious around parents

**Affective tone**
- Parent or infant shows anxious mood.
- Motr tension. Apprehension. Agitation
- Facial expressions. Quality of speech and vocalizations
- Parent and infant overreact. Escalation.

**Psychological involvement**
- Parent often misinterprets, responds inappropriately (e.g., feelings of failure or rejection in the parent when infant cries)
Interactions are harsh and abrupt, lack emotional reciprocity. Relationship conveys to clinician anger and hostility.

**Behavioral quality**
- Parent insensitivity, mostly if infant is demanding
- Physical handling is abrupt
- Parent may tease infant, taunt
- Infant may be frightened, anxious, inhibited, impulsive, or diffusely aggressive
- Child may be defiant or resistant toward parent
- Child may be fearful, avoidant and vigilant
- Child, tendency to concrete behavior rather than fantasy or imagination

**Affective tone**
- Parent child interaction is hostile or angry
- Tension between parent and infant lack of enjoyment or enthusiasm
- Child’s affect maybe constricted

**Psychological involvement**
- Parent may resent child’s needs (due to stressors or own interpretations)
- Parent may see child as his dependent parents
- Sees age appropriate independence as defiance or attempt to control
- Parent project neg. feelings to infant.
Relationship Disorders

Types of Relationship Disorders:

1. Overinvolved
2. Underinvolved
3. Anxious/Tense
4. Angry/Hostile
5. Mixed
6. Abusive

Abusive Types:

A. Verbally abusive
B. Physically abusive
C. Sexually abusive
### Behavioral Quality
- Parent often interferes
- Parent dominates, overcontrols
- Makes develop inappropriate demands
- Infant may be diffuse, unfocused, undifferentient
- Infant submissive, overcompliant or defiant
- May have lack of motor skills or language expression

### Affective Tone
- Parent may have periods of anxiety, depression or anger. Lack of consistency in interaction
- Infant may react passively or express anger and obstinacy directly and whine

### Psychological Involv.
- Parent may perceive infant as partner or peer may romanticize or erotize
- Parent does not see infant as separate
- Lack interest in infant’s uniqueness
- Diffuse generational boundary
- Confidante
- Extreme physical closeness
- Meet parent’s own needs
- No reciprocity
**Relationship Disorders**

**Underinvolved Relationship Disorder**

**Behavioral Quality**
- Parent insensitive or unresponsive
- Inconsistency between expressed attitude in parent and interaction
- Parent ignores, rejects, fails to comfort the infant
- Parent does not mirror infant’s behavior, reflection of infant’s feeling states
- Not protect infant from harm by others
- Interactions underregulated, cues missed or misinterpreted
- Dyad appears disengaged
- Infant may appear uncared for (often ill, no good med. care. infant dirty)
- NOFT. Delays in motor or language skills since no support.

**Affective tone**
- In both parent and infant is constricted, withdrawn
- Sad
- Flat
- Interaction of lifelessness
- Absence of pleasure

**Psychological involvement**
- Parent not aware of infant’s cues or needs
- Parent may have history of deprivation, neglect
Sensorimotor Realm

Coping Abilities of Infant

Self-initiated Behavior

Reactive Behavior
### Sensorimotor Organization

<table>
<thead>
<tr>
<th>Visual attention</th>
<th>Reaction to touch</th>
<th>Tolerates variety of positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleasure in self-initiated movement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-regulation of basic body functions</td>
<td></td>
<td>Varies activity level according to situation</td>
</tr>
</tbody>
</table>
Reactive Behavior

Accepts emotional warmth and support from people

Reacts to feelings and moods in other people

Some tolerance of frustration

Adapts to daily routine

Engages in reciprocal social interactions

Bounces back after stressful situations

Adapts to some change in the environment
Self-initiated Behavior

Initiates action to communicate need

Tries new behaviors by himself

Tries to achieve a goal

Balances independence with dependency

Problem solving ability

Demonstrates persistence during activities
Interventions for Sensory Processing Dysfunctions

Give feedback: Verbal and non-verbal
Avoid rushing the child. Pace interaction to allow time to respond
Emotional feedback is useful (smiling, hugs, looks of pleasure, etc.)

Verbal interaction
- Short sentences. Positive directions
- Short reasons for requests
- Praise
- Label of feelings

Building on previous achievement, rather than initiate new strategies, i.e. scaffolding
Interactions: spontaneous. Playful, not “teaching”
Interventions Child Hypersensitive

- Look for early signs of distress. Stop. Time to recover. Slow pace.
  - Firm pressure on skin
  - Massage—Induce relaxation
- Develop a calming technique
  - Slow repetitive rocking. Child in vertical position or lap
  - Rhythmic motion
  - Swaddling (young infant)
  - Soft melodies, lullabies or white sounds
- Encourage development of self-comforting behaviors
Interventions Child Hypersensitive (cont.)

- Assess complexity of input during interaction. (Several sensory modalities at one time or just one or two). Sensory diet.
- Examine if child irritability makes parent tense and amplify disorganization.
- Grade environmental stimulation (not glaring light, overcrowding, noises).
- Increase sensory tolerance by pleasurable activities.
- Provide reasonable routine. Rituals may help child organize. Forecast transitions and rituals.
- If possible provide choices for stimulation and build on self-initiated activity.
- Sensory input may be cumulative. Schedule breaks of recovery.
Interventions Child Hyposensitive

- Provide enough time to react. Slow response or additional input to elicit response
- Engage in child-directed play. Narrate child’s actions
- Model affective reactions during play. Exaggerate response
- Search for attempts at non-verbal communication
- Complete circles of interaction
- “Jump start” the child’s reaction
- Avoid imposing input
- Free play with peers to model reactions
Interventions to Help child Become Organized

- Child directed play without demands. Follow child’s lead
- In play, ask questions about next steps
- Work on child’s organization and not adult’s organization
- Allow repetition and practice
- Reinforce successive approximations
- Emphasize fantasy and emotional themes
- Forecast transitions
- Enhance body awareness and motor control.
  Somatosensory input
- Engage child in planning activities
Intervention.
Sensory Based Sleeping Problems

- Determine if day time is too stimulating, so child prefers night
- Calming input in evening: Slow linear movement in on axis Touch pressure. Massage Curl up in bean bag or chair
- Watch for sensory overload
- No arousing activities before sleep time
- Support self-comfort maneuvers before sleep onset
- Bed is compatible with sensitivities of child (scratchy fabric, lumpy surface) Sheets are not cold. Vestibular input?
- Background of white noise. Continuous sound
- Sleep clothing. Preference for textures
- Games of separation. Transitional objects
Intervention.
Sensory Based Feeding Problems

- Assess complexity of sensory input during feeding
- Feeding when child is relaxed and alert. Environment calm
- Routine associated with beginning and end of meal
- Calming techniques prior to feeding
- Avoid frequent wiping of mouth (face sensitive). Let child wipe
- No scraping of food off from lips
- Changes in food texture introduced slowly
- Use of tooth brushes
- Parents emotionally supportive and available. Social interaction
- Culturally based feeding practices