

## **Chapter 2**

# Developmental and behavioral disorders

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## Normal social and behavioral development at different ages

### • At Birth:

- Primitive Reflexes as Moro (Startling reflex, rooting reflex, suckling and swallowing reflex).

### • At One month:

- Tight palmar grasp.
- Alerts to sound.
- Regards face {eye-eye conversation}.
- Involuntary Smiles and cries while asleep.

### • At 2 months:

- Holds and controls head in midline, to 45° from prone.
- Social reactive smile around 40 days
- Coos.
- Recognizes parents.

### • At 3 months:

- Supports on forearms when prone and starts looking around.
- Holds head steady.
- Hands open at rest. (less grasp)

### • At 4 months:

- Rolls front to back, then back to front.
- Supports on wrists when prone.
- Grasps hands together (as supporting himself!).

### • At 5 months:

- Laughs loudly.
- Enjoys looking around(wondering amazing ,starring)

### • At 6 months:

- Sits well unsupported.
- Transfers objects with Selective grasp.

- Recognizes strangers.
- No head lag.

- **At 9 months:**

- Says Pappa, Mamma, nanna, dadda: nonspecific
- Waves Bye-bye.
- Feeds self by hands and finger, starting some kind of independence.
- Creeps, crawls, pulls to stand.

- **At 12 months:**

- 2-4 words, papa, mama/dada specific.
- Helps turn page of book.
- Indicates wants and needs.

- **At 15 months:**

- 3-5 words.
- Follows commands.
- Walks independently.
- Drinks from cup.
- Imitates others activities.

- **At 18 months:**

- 5-10 words.
- Points to 4 body parts.
- Walks up steps erect and alone.
- Feeds self with spoon, fork or hands.
- Runs.

- **At 2 years:**

- Combines 2 words.
- Uses "I", "you" and "he/she" appropriately.

- **At 3 years**

- Gives full name, age and sex.
- Names 3 colors, all body parts.

- Walks upstairs and downstairs, and can walk with alternating feet.
- Puts on shirt
- Copies circle
- Draws person with 3 parts.

- **At 4 years:**

- Counts 4 objects correlated.
- Identifies some numbers and letters.
- Copies squares and rectangles.
- Draw person with 4 parts.

- **At 5 years:**

- Hops on one foot, pedaling and swimming.
- Dresses with little or no assistance.
- Understands prepositions and situations.
- Full intelligent coherent speech and Full bladder and bowel control. (the best of childhood era)

- **At 6 years**

- Write first name and some words.
- Counts to 10, (5+5) and multiply 5x5.
- Asks meaning of words.
- Skips (jump over a rope).
- Ties shoes.
- Plays competitive games.

## **Factors Affecting development and behavior**

1. Genetic and Pre-natal: as in ADHD, and Autism.
2. Peri-natal: ADHD.
3. Post-natal and Environmental may induce and or exaggerate the behavioral problems e.g. infectious agents, irradiations, food additives, junk and fast foods (bakeries are exceptionals) and heavy metal exposure.
4. Mass media effects.
5. Death or Traveling of one of parents or both, grandparents or beloved person.

6. Stressors and multiple or sustained psychic traumas as wars, disasters, excessive competitions and exams, child abuse and trafficking.
7. Care-givers influences as in schools& nurseries
8. Drugs specially abused ones, mercury of vaccines.
9. Developmental or maturational defects.
10. Lack or complete absence of family or /and society support.
11. New baby in the family.
12. Idiopathic.

## **Some common developmental and behavioral disorders**

### **A. Breath Holding Spells (infantile syncope)**

- Involuntary.
- initiated by a noxious stimulus ,
- associated with crying,
- consciousness and posture may be lost
- occurs from infancy through age 5,
- Two types: pallid or cyanotic,
- may be associated with convulsive movements

### **Etiology**

It is due to immaturity or developmental delay of the respiratory center causing it to stop working and hence stoppage of breathing with prolonged and or repetitive expirations during crying. With arrest of breathing, severe hypoxia and/or hypercarbia reach to the high levels needed for the respiratory center to regain work, so a vicious circle commences.

### **Management**

EAT the guardians: Explanation, Assurance and Training of the guardians as parents and grand-parents, relatives, neighbors (if needed!!) as the attacks will stop by age of 5 years.

Some cases may need some investigations as Echocardiography or even CT or MRI to assure the family.

## B. Enuresis and Encopresis

### Definitions:

- **Enuresis:** Uncontrolled micturition by age of 5.

#### Types of enureses:

- Primary or secondary,
- Nocturnal, diurnal or mixed

- **Encopresis:** uncontrolled defecation beyond age of 4 years.

#### Types of encopresis:

- Retentive with overflow, or non-retentive.
- Primary or secondary.

## Etiology

- Maturation or developmental defect.
- A sleep disorder.
- Genetic.
- Psychogenic stressors.
- Organic: as spina bifida, UTI, Constipation....etc
- Hormonal as in ADH deficiency (diabetes insipidus), diabetes mellitus.
- Lack of parental toilet training.
- Severe pelvic trauma
- Child abuse.
- Compulsive water drinking.
- Physical Stressors and illnesses.
- Bad sanitary conditions.

## Management

Full history taking and thorough physical examination especially abdomen, pelvis, spine, rectum, blood pressure, and urine analysis should be performed.

Parents must avoid corporal punishment which causes psychic insult and aggravates the problem (with regards to organic causes), instead try encouragement.

Use least possible drugs, tools as Enuresis Alarm Devices (EADs) and instructions.

## C. Attention-deficit/hyperactivity disorders(ADHD)

### ➤ Triad of ADHD:

- Inattention
- Hyperactivity
- Impulsivity

### ➤ 2nd Triad of ADHD: each of above is:

- Pervasive
- Progressive
- Persistent for more than 6 months and occurs in the first decade of life.

### ➤ According to DSM-MD IV-TR (Diagnostic and Statistical Manual of Mental Disorders-fourth edition –Text Revision) is characterized by:

## I) INATTENTION DOMAIN OR SIGNS:

- Do not complete assignments.
- Disruptive.
- Often “off task”.
- Impulsive behavior.
- Over curious without satisfaction!
- Finally, it is a “complete mental chaos”!!
- Characteristics Of ADHD

## **II) HYPERACTIVITY DOMAIN or SIGNS:**

- Hyperactive (and Destructive)!!
- Fidgety (enemy of the chairs)!!
- Runs around the room (like a bee)!!
- Overexcited (for nothing)!!
- Blurts out answers (bizarre)!!
- Interferes with other's activities!!
- Struggle with school and rejection by their peers (colleagues)!! .

### **➤ Some Adaptive Behavior Scales for ADHD:**

Must be done by a licensed mental health professional for medico-legal and ethical issues.

- 1- American Academy of Pediatric Neuropsychiatry (**AAPNP**) Adaptive Behavior Scales
- 2- Vineland Adaptive Behavior Scales(**VABS**)
- 3- Scales of Independent Behavior
- 4- Child Behavior Rating Scale(**CBRS**)

### **➤ Complications or co-morbidities of ADHD:**

1. School failure: 33% held back a year.
2. Poor social skills: 90%.
3. Sleep problems: 50%.
4. Fine motor delay: 90%
5. Accidental injury to self and others: 60%
6. Additional psychiatric diagnosis: 50%.
7. Learning disabilities: 30%.

### **➤ Intervention strategy for ADHD:**

- Teamwork is essential! It is not one-man show!! Collaboration by Parents, general educators, special educators, counselor, psychologist, and the physician will bring the greatest results.
- Medication: Ritalin or other.
- Dietary changes:
  - 1-More fish & tuna and sea foods,
  - 2-No more sugars and sweets, chocolate,
  - 3-No more junk and fast foods.



- Behavior management.
- Structured teaching.
  - Academic assignments must be clear and manageable.
  - Make sure that the student understands what to do.
  - Smaller, less complex tasks may be required followed by reinforcement.
  - Place students near teacher or in front row, maintain eye contact.
  - Provide work area without distractions for individual work.
  - Require unused materials be stored away
  - Provide verbal and visual directions.
  - Warn about and explain transitions between activities or places.
  - Have a few simple rules and review these rules
  - Reward appropriate behavior, withhold or reinforcement for inappropriate behavior, rank your child higher than expected.
  - Use charts, points, stickers, etc, to make reinforcement visible.
  - Finally, programs of intervention should be affordable for the child and his family.

### **D. Autistic Spectrum Disorders(ASD) (Childhood Autism)**

- Children who are diagnosed as autistic show problems in three main areas:
  1. Social interaction
  2. Communication, and
  3. Stereotyped behavior problems
- Autism is more common in males than females occurs in about 4-5 out of 10,000 live births(1/2000)
- Autism is explained by altered brain neuro-chemistry resulting in disturbed information processing and weak retrieval memory.
- May resemble a computer infected by a virus deleting most new data and preventing saving them!
- May be exaggerated by deficiency of trace elements specially zinc and selenium.

### Manifestations of Children with Autism

- ✓ Often show a severe lack of language development.
- ✓ Most communicate in a limited, usually showing various abnormal speech and language characteristics.
- ✓ A minority (severe cases) may not communicate at all.
- ✓ Usually show atypical characteristics in the production, form, and content of their speech. Speech sounds may have inappropriate volume, pitch, rate, rhythm, or tone, be monotonous, have a melody like quality, or be high pitched
- ✓ Body language is atypical
- ✓ They may not make or sustain eye contact, vary their facial features, or change their body posture when conversing.
- ✓ They show little or no emotions.
- ✓ Exclude much of the rest of the social world.
- ✓ Lack of social reciprocity.
- ✓ Do not interact with others with typical emotionalism.
- ✓ Some display stereotyped movements or behaviors such as hand flicking, spinning, or complex body movements, produced for escape or self-stimulation. These behaviors are enhanced by excitement, anxiety, boredom and social demands.

### Investigations

1. EEG
2. Hearing acuity.
3. MRI
4. I.Q.
5. Early diagnosis using some objective measures as Childhood Autism Rating Scale(CARS)

**Treatment**

NO COMPLETE CURE!! But doctors, therapists, teachers and parents can help.

- ✓ Behavioral and educational therapy programs like: Treatment and Education of Autistic Children (TEACH) are very helpful. Doctors must be frank and optimistic using simple language and must not leaving the family desperate behind them.
- ✓ Neuroleptic agents as Haloperidol, Risperidone and some Antidepressants may help with regards to their side effects.
- ✓ Hyper-baric Oxygen

**E. Other Behavioral disorders:**

## 1. Sleep Disorders(BEARS):

B: Bedtime Problems.

E: Excessive Daytime Sleepiness.

A: Awakening During the Night.

R: Regularity and Duration of Sleep.

S: Snoring

## 2. Anxiety disorders.

## 3. Mood disorders as major depression.

## 4. Childhood psychosis as childhood schizophrenia and Asperger's syndrome.

## 5. Habit disorders as tics, thumb sucking and teeth grinding.

## 6. Gender identity disorder (GIDs).

## 7. Disruptive disorders as aggression and conduct disorders.

## 8. School phobias (the great imitators!!).