



- Development of the cerebral cortex (the part of our brain which is responsible for all of our developed behavior and thinking) begins at 56 days of gestation. Reorganizations of neurons and pathways within cerebral cortex continue to develop and mature through the first few post-natal years (until 4th year of life... after which the growth becomes slow).
- **Neuronal plasticity:** this means that different connections in our brains will develop according to neural activity and external influences:
 - **Pre-natal:** via maternal physiology and psychology.
 - **Post-natal:** through environment (e.g. nutrition, education, culture, attachments and relationships).

- **Physical development:**

- **By 2 years of age, the following will occur:**

Height	Reaches ½ adult height potential
Weight	Quadruples (X4)
CNS	Matured with motor, perceptual إدراك حسي abilities and language

- **Physical growth:**

- ✓ It starts from head to toes and from proximal parts of extremities to distal parts.
- ✓ Growth is affected by gender (e.g. growth begins earlier and is faster in females).

- **Temperament (mood) development:**

- It is defined as an individual’s character, disposition and tendencies as revealed in his reactions.
- **Temperament attributes صفات المزاج :**

Activity level	Daily proportion (e.g. day and night) of active and inactive periods
Regularity	Referring to predictability of different functions (e.g. sleep cycle, hunger, feeding pattern... etc)
Approach/withdrawal	Assessing the initial response to a new stimulus
Adaptability	Assessing if it is easy to modify a certain response to a new or altered situation as desired by the person himself
Threshold of responsiveness	To know the intensity needed from the stimulus to initiate the response by a person
Intensity of reaction	The energy level of the response
Quality of mood	The amount of pleasant, joyful, friendly behavior as contrasted with unpleasant, crying, unfriendly behavior
Distractibility التشويش	Can an external stimulus change the direction of an ongoing behavior
Attention span and persistence	How long a person is capable of keeping his attention on what he is doing even if there are other stimuli trying to distract him

- **Temperament constellations:**

Easy temperament (40%)	Characterized by regularity, quick adaptability to changes and positive mood with mild-moderate intensity
Difficult temperament (10%)	Characterized by irregularity, slow adaptability to changes and negative mood with high intensity
Slow to warm-up temperament (15%)	Characterized by slow adaptability to changes and negative mood with low intensity (the person is shy).



- **Cognitive development:**

- It is defined by what a child needs to understand the world, to remember things, to solve problems (with critical thinking) and to organize his environment.
- **To structure such schemes برمجيات-نظم within the brain, children use two complementary processes:**
 - ✓ Assimilation الاستيعاب-الامتصاص: taking a new experience into an existing schema.
 - ✓ Accommodation: modifying an existing schema to adapt a new experience.
- **There are four stages of cognitive development:**

Sensorimotor stage (from birth – 2 years of age)	<ul style="list-style-type: none"> • In which an infant uses body senses and activity to explore the environment: <ul style="list-style-type: none"> ✓ Birth-1 month: primitive reflexes ✓ 1-4 months: imitation تقلد يد; smiling ✓ 4-8 months: looking for objects partially hidden ✓ 8-12 months: peek-a-boo and finding hidden objects ✓ 12-18 months: exploring properties and dropping objects ✓ 18 months-2 years: memory of objects
Pre-operational stage (from 2-7 years of age)	<ul style="list-style-type: none"> • Children become intuitive يعتمدون على الحدس but still thinking illogically • Concepts: <ul style="list-style-type: none"> ✓ Egocentric الأنانية (thinking only of oneself) ✓ Animistic (the belief that natural objects possess souls). Therefore, a child might say: “I am afraid of the moon” ✓ Lack of hierarchy التسلسل الهرمي ✓ Centration (the tendency to focus on one silent aspect of a situation and neglecting anything else). Example: “I want it now, not after dinner”. ✓ Transductive reasoning “We have to go this way because that’s the way daddy goes”
Concrete operational stage (from 7-11 years of age)	<ul style="list-style-type: none"> • The ability to think logically باستخدام المنطق and in an organized fashion. Notice that concepts are all opposite to those mentioned above in the pre-operational stage
Formal operational stage (from 11 years and above)	<ul style="list-style-type: none"> • Concepts: <ul style="list-style-type: none"> ✓ Hypothetic-deductive استنتاجي reasoning ✓ Imaginary audience (everyone is looking at them). ✓ Inflated opinion of themselves. ✓ Logical thinking. ✓ Capacity to think abstractly

- **Attachment:**

- It is defined as the need to keep proximity اقرباة
- This is a sensitive period in the first 3 years of life and promoting proximity to caregiver.



- **Phases of attachment:**

Pre-attachment (0-6 weeks of life)	-
Attachment making (6 weeks-8 months of life)	Preferring one particular person (the caregiver = mama ☺)
Clear cut attachment (8 months-2 years)	A child has learned trusting people which will always be there for him
Reciprocal relationship (2 years and above)	-

- **Care-giving vs attachment types:**

Quality of caregiving	<ul style="list-style-type: none"> • Loving. • Rejecting. • Inconsistent. • “Atypical”
Types of attachment	<ul style="list-style-type: none"> • Secure attachment (65%): child protest <i>يعترض</i> during separation from mother and will greet mother when she returns with pleasure. • Avoidance (21%): child doesn't appear to be affected by separation and will avoid proximity with mother when she returns. • Resistance (14%) : child shows distress with separation, mix of looking for contact and angry rejection; child has difficulty being comforted. • Disorganized: when mother returns, the child will greet her with pleasure and raises arms to be picked up but then turns away and becomes motionless.

- **Psychosocial development:**

- Freud's psychosocial development is composed of the following phases: oral, anal, oedipal, latency and genital phases.

- **Erik Erikson:**

Basic trust vs mistrust (0-1 year of age)	<ul style="list-style-type: none"> • Consistency vs inconsistency of care • Availability vs unreliable availability of caregiver • Unconditional acceptance vs feeling rejected
Autonomy vs shame (1-3 years of age)	<ul style="list-style-type: none"> • Toilet-training, self care, clothing and body functions are all skills that develop in this period. Delay in these skills will result in shame.
Initiative vs guilt (3-5 years of age)	<ul style="list-style-type: none"> • Exploration, playing with peers and social skills. Initiative leads to ability to achieve these tasks while lack of it will result in the sense of guilt
Industry vs inferiority (6-11 years of age)	<ul style="list-style-type: none"> • Ability to use skills to be creative and productive results in encouragement and acknowledgment from parents and important others.
Identity vs role confusion (11-20 years of age)	<ul style="list-style-type: none"> • Social relationships and real capacities for independence help the development of a mature sense of self in relation to others, the community and society.
Intimacy vs isolation (21-40 years of age)	<ul style="list-style-type: none"> • The development of close, intimate, loving relationships
Generativity vs stagnation (40-65 years of age)	<ul style="list-style-type: none"> • Work and contributions to the community.
Integrity vs despair (65 years of age and above)	<ul style="list-style-type: none"> • Maturity and pride of accomplishments vs bitterness/regrets