**CHILD DEVELOPMENT**

**Growth** is physical development i.e. increase in size and number of cells and tissues. Different parts and organs of the body grow at different times. Growth is measured by anthropometry and evaluated by growth reference lines in growth charts.

**Development** is change in function of the different body parts and is due to change in intellect. Development is difficult to separate from growth because each is affected by the other. So abnormal growth will lead to abnormal development. As there are individual variations in growth, there are also individual variation in development. Children grow and develop differently. In all children development is a a continuous process and stepwise. For example a child cannot walk before he stands independently and cannot talk before he crawl.

There are 4 developmental abilities; these are:

1. **'Fine motor'** (المقدرةن الحركية) and this refers to functions such as writing and drawing and involves the use of fingers.

2. **'Gross Motor'** (المقدرةن الحركية المجملة) and this refers to functions such as walking, playing games which involve use of big muscles.

3. **Language** (اللغة) and this refers to the ability of communicating verbally and bodily.

4. **Personal/Social** (المقدرات الاجتماعية) and this refers to ability to interact with others and can start from early childhood by the child smiling when spoken to.

The 4 developmental abilities are coordinate and integrate. For example walking is 'gross motor' but walking could be initiated by curiosity leading to learning something new. In other words; each of the 4 abilities could be used to achieve the other.
For a child to develop normally, there are several needs to be satisfied or fulfilled. Some of these needs are material needs, others are psychological or emotional.

**Material Needs of Development**

1. Housing  
2. Physical care  
3. Protection  
4. Food/nutrition  
5. Clothing  
6. Warmth  
7. Clean air  
8. Sunlight  
9. Activity

**Psychological/Emotional Needs of Development**

1. Love/affection  
2. Emotional care  
3. Security  
4. Self-respect  
5. Education  
7. Opportunity to learn from personal experience  
8. Opportunity to achieve success even if little  
9. Opportunity to shoulder responsibilities for others.

**FACTORS AFFECTING DEVELOPMENT**

Various factors affect child development. There are factors that affect development before the birth of the child, others during and many after birth of the child.

Some of these factors are:

1. **Parents-related** such as level of intelligence of parents, their characters, orientation and maternal age at birth. The culture of parents or the community is also an important factor affecting child development.
II. Genetic factors: disorders can affect development. The best example is congenital anomalies which interfere with developmental abilities.

III. Metabolic diseases:
Many metabolic diseases and inborn errors of metabolism may affect child development e.g., congenital hypothyroid

IV. Chromosomal Abnormities
Chromosomal aberrations and abnormalities may also affect development negatively e.g., Down syndrome.

V. Pregnancy Related Factors
These include:
1. Diseases of pregnancy
2. Multiple pregnancy
3. Use of drug
4. Infertility
5. Uterine and placental problems
6. Maternal exhaustion
7. Prematurity
8. Abnormal presentation
9. Post maturity
10. Neonatal hypoxia
11. Birth injuries
12. neonatal convulsions.
VI. **Environmental Factors**

These include:

1. Nutrition  
2. Family size  
3. Early illness  
4. Emotional deprivation.

Currently, developmental abilities of children in many developing countries are measured using the same norms of Western standards. However, many countries either modified Western standards or developed own standards which are relevant to the culture and environment.

**Developmental Screening**

Developmental screening is an important procedure in childhood. It is a tool for secondary prevention. It aims at early detection of any developmental abnormality. Screening is the organized procedure for early discovery of diseases or risk factors in people who are apparently healthy. A screening tool is not necessarily a diagnostic tool but those at risk screened must be referred for diagnosis and treatment. The best example of a screening test is that for PKU (phenyl ketonuria). By using screening for PKU, the age at which PKU was diagnosed was reduced from 4 years to 4 weeks.

**Criteria for Screening Tool**

Validity – which measures sensitivity and specificity.

Reliability – the screening test should give the same results when reused.

Fast – to screen larger number in a short time

Simplicity – test doesn't need great expertise

Cost-effectiveness – test of low cost

Culturally acceptable to the community