

**Biological, Psychosocial, and Educational
Antecedents/Determinants of
Sustainable Development**

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Outline

- **Skills that matter for employability, productivity, and policies**
- **Human development: the perinatal period**
- **Human development: the postnatal period: ages 1 to 3**
- **Basic parenting**
- **Peers, play, and social skills**
- **Complexity of human development**
- **Human development, health, education, training, and sustainable development**

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“Knowledge and skills [attitudes] are the most valuable assets to present and future generations, as governments seek to maintain global competitiveness, increase the flexibility and responsiveness of labor markets, and deal the issues of population aging...”

- Angel Gurría,
O.E.C.D. Secretary-General

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**Skills that Matter for Employability, Productivity,
and the Policies to Develop Them**

- **Skills Toward Employment and Productivity (STEPS)**
- **Cognitive, Technical, and Socio-emotional**

System Assessment and Benchmarking for Education Results (SABER)

- **Strategic Framework**
- **System oversight**
- **Service delivery**

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Human Development: The Perinatal Period

A.

- **Mother's health**
- **Nutrition**
- **Education**
- **Contexts – social, economic, environmental**

B.

- **Intrauterine growth and development**
- **The human brain**

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**Human Development:
The Postnatal Period: Ages 1 to 3**

- **Human brain development**
- **Frontal and parietal areas proliferation – 5 to 9 times larger**
- **The limbic system – familial and social behaviors**
- **Facial and vocal expression**
- **Emotions and inter-individual connectedness**
- **Preceding language development**

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**Human Development:
The Postnatal Period: Ages 1 to 3
(continued)**

- **Sensory stimulation vs. deprivation**
- **Visual, auditory, tactile, olfactory, taste**
- **Attachment and separation – neurotransmitters**
- **Licking, grooming – demethylation – gene expression**
- **Rearing environment**

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Basic Parenting

- **Regulation – training of infant’s psycho-physiology**
- **Soothing voice, calming touch, rocking**
- **Familiarity, similarity of detail**
- **Soothing, learning**
- **Longest period of dependence among mammals**
- **Attention directing from one object to next**

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Basic Parenting, *continued*

- **Language and other symbolic skills**
- **Voluntary attentional capacities**
- **Finer distinctions**
- **Cognitive and retentive**
- **Influencing from a distance**

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Basic Parenting, *continued*

- **Motor and cognitive functions**
- **Setting goals**
- **Selecting strategy**
- **Tools and objects**
- **Focusing and sustaining attention**
- **Fine motor aspects of tasks**

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Basic Parenting, *continued*

- **Turn taking**
- **Imitation and language development**
- **Close human bond – parent and child**
- **Extended post-natal development of human brain**
- **Imitation's extensive impact and modeling**
- **Pleasurable reinforcement**

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Basic Parenting, *continued*

- **Language itself realized through imitation**
- **“Baby language,” adult language**
- **Capacity for language linked to genetically encoded features**
- **Unique to the human brain**
- **Composite effects of internalization/identification**
- **Mother-infant unit of psychophysiological development**

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Peers, Play, and Social Skills

- **Play with peers essential for social skills' development**
- **Genetically pre-determined**
- **Needs to be exercised to develop**
- **Human play vs. animal play**
- **Motoric and cognitive, nuanced**

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Complexity of Human Development

- **Bio-behaviorally mature adults**
- **Malleable, unstructured, infants and young children**
- **Body to body – physical**
- **Holding, touching, feeding, cleaning, others**
- **Parenting – memory, planning, organization, strategy**
- **Stimulating – sensory, motor, maturation**
- **Complex functional systems**

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**Human Development, Health, Education, and Training:
Essential for Sustainable Development**

- **Human development, intrauterine and postnatally**
- **Maternal & child health**
- **Health across sectors**
- **Pre-school**
- **School age elementary and secondary education**
- **Higher education**

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**Human Development, Health, Education, and Training:
Essential for Sustainable Development**

continued

- **Lifelong learning and innovation**
- **Cognitive, technical, psychosocial, team oriented**
- **Integrative, trans-disciplinary**
- **Systemic, systematic**
- **Nationally, regionally, and globally**

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