Factors Affecting Motor Development

PED 201
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Key Concept

Both the Processes and Products of Motor Development Are Influenced by a Wide Variety of Factors Operating in Isolation and in Conjunction With One Another.

Factors Affecting Motor Development & Growth

• Genetics
• Experience
• The demands of the task.
Refining…developing

• Part of a complex interaction of…
• This interaction continues throughout life…

Factors Within the Individual

Developmental Direction

• Cephalocaudal development
• Proximodistal development

Factors Within the Individual

• Neuro-motor maturational principles.

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Factors Within the Individual

Rate of Growth

• Self-regulation
• Placticity

Factors Within the Individual

Reciprocal Interweaving

• The intricate interweaving of neural and opposing muscle systems into an increasing mature relationship.

Factors Within the Individual

Reciprocal Interweaving

• Differentiation
• Integration
Factors Within the Individual

• Readiness

• Critical and Sensitive Learning Periods

Factors Within the Individual

• Individual Differences

• Phylogeny and Ontogeny

Factors in the Environment

• Infant bonding (Imprinting vs. Sensitive periods vs. Long term outcomes)
Factors in the Environment

• *Infant stimulation* (Structured activity programs vs. Normal play environments)

Factors in the Environment

• *Infant deprivation* (Maturation vs. Experience)

Physical - Task Factors

Prematurity

• Under 4.5 lbs. (2000 grams)
• Associated with…
**Physical - Task Factors**

- Low-birth Weight
  (1500-2500gms. 3.35-5.56lbs. = -2SD < X for gestational age)
- Young-for-Date

**Factors in the Environment**

- Genetics & obesity (70% chance of being obese adult if not slimmed down by age 14)
- Ethnicity and obesity (Blacks, Hispanics, Whites)

**Physical - Task Factors**

- Eating Disorders
- Fitness Levels (physical & mechanical factors)
Overweight - Obesity

- **Overweight** (BMI >25 = 20% of USA children & 55% adults)
- **Obesity** (BMI >30 = 11.6% of USA children & 55% adults, 300,000 deaths each year, second leading cause of unnecessary death)

Eating Disorders

- *Binge eating without purging* ("triggers" = depression & negative emotions)
- *Bulimia* (binge-purge process)
- *Anorexia* (self-starving process)
- Bulimia & anorexia (90% female, 3-4% of population)

Physical - Task Factors

- Health-Related fitness
- Performance-based fitness
Physical Factors Within the Task

- Physical Activity
- Physical Fitness
- Health-related components (genetic basis & nutritional status)
- Performance related components (generality of motor ability vs. specificity of motor abilities)