THE POWER OF PLAY

Redefining Priorities in Early Childhood

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Children's Book Council
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• Play is brain building

• Play facilitates the normal developmental progression from dependency to independence

• Pre-school curricula must emphasize informal, play-based learning

• Adult success is enhanced by play in childhood
WHAT IS PLAY?

- Enjoyable
- No Extrinsic Goals
- Voluntary
- Active Engagement
- Brain Building
- Business of Childhood
- Development of Executive Function
Development results from an on-going, re-iterative, and cumulative dance between nurture and nature.

**SUMMARY**

- **Experience**
  - Protective and Personal (versus Insecure and Impersonal)

- **Brain Development**
  - Alterations in Brain Structure and Function

- **Epigenetic Changes**
  - Alterations in the Way the Genetic Program is Read

- **Behavior**
  - Adaptive or Healthy Coping Skills (vs. Maladaptive or Unhealthy Coping)
Critical Concept #2
Epigenetics:

• Which genes are turned on/off, when, and where

• Ecology (environment/experience) influences how the genetic blueprint is read and utilized

• Ecological effects at the molecular level

• Stress-induced changes in epigenetic switches (and gene expression)

“Genes may load the gun, but the environment pulls the trigger”
Out of Balance?

Prefrontal Cortex
- Cold Cognition
- Judgmental
- Reflective
- Calculating
- Think about it

Amygdala
- Hot Cognition
- Emotional
- Reactive
- Impulsive
- Just do it

Biological maturity by 24

Adapted from Ken Winters, Ph.D.
- Attunement
- Hands-On Play
- Physical Play
- Imaginary Play and Storytelling
- Guided Play
Attunement
Hands-on Play
Physical Rough and Tumble Play
Imaginary Play
Guided Group Play
Fostering Self-Regulation

• Tools of the Mind
  — Mature make-believe play
  — Planning play
  — Teacher scaffolding
  — Peer interactions; buddy reading, doing and checking
  — Use of mediators
  — Self-regulation games
Disparities in Early Vocabulary Growth

Parent Talkativeness (not SES or race) predicted IQ & vocabulary

Hart and Risely

- Talkative families: 5-6 times more “praise chats” than “prohibitions”
- Taciturn families: more “prohibitions” than “praise”
- IQ (Stanford Binet) at 3 years correlated high with “non-business” talk at 1 & 2 yo - explaining 61% of the variance in IQ
- PPVT (Receptive Language) at 3rd grade correlated highly with “non-business” talk 1 & 2 yo - explaining 59% of variance
Promoting the Five R’s of Early Childhood Education

• **READING** together - daily
• **RHYMING**, playing and cuddling
• **ROUTINES** – help children know what to expect of us - what is expected of them
• **REWARDS** for everyday successes – PRAISE is a powerful reward
• **RELATIONSHIPS**, reciprocal and nurturing - foundation of healthy child development
US Spending on Early Childhood

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Source: Organization for Economic Cooperation and Development
Perry Preschool and Abecedarian Projects: An Update

- Improved behavior/psychological functioning in Perry treatment group, associated with lower arrest, incarceration rates among males (Am Econ Rev, 2013)
- Lower rate of teen pregnancy, higher educational and employment status
- Follow up at age 30: substantially lower blood pressure, lower rates of metabolic syndrome (Abecedarian study, Science, 2014)
Public Investment in Children by Age

- Brain's Capacity to Change
- Spending on Programs to “Change the Brain”
Heckman Equation

Annual return on investment in early childhood: 7-10% (Heckman et al.)
Building an Enhanced Theory of Change that Balances Enrichment and Protection

Significant Adversity

New Protective Interventions

Healthy Developmental Trajectory

Supportive Relationships, Stimulating Experiences, and Health-Promoting Environments
PLAY

• MOMA: Century of the Child, 1900-2000

Play is to the 21st century what work was to industrialization; it demonstrates a way of knowing, doing and creating value.
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Rx

Name________________________
Address______________________

Prescription for Play

Refill: 1 2 3 4 Daily

MD