

# Do we need Developmental - Behavioral Pediatrics?

Boaz Porter  
Goshen 2.20



# **My Presentation**

- **History of Pediatrics**
- **My Personal History**
- **My Great Teachers**
- **Lessons learned**

# OFAKIM

- Setting up an academic model for Community Pediatrics
- Clinic overloaded with common acute problems
- Appearance of common developmental-behavioral issues that I knew nothing about
- Colleagues perceived Ofakim as the Gulag

# Diagnoses by ICD

Ref: Management of Problems Related to the New Morbidity Porter B et al Child October 2010

ICD	n	%
Fill out forms	73242	11.6
Acute upper respiratory infections	65488	10.4
Acute nonsuppurative otitis media	35378	5.6
Patient under observation	33496	5.3
Acute tonsillitis	33322	5.3
Fever	28571	4.5
Cough	24686	3.9
Common cold	20756	3.3
Acute pharyngitis	19622	3.1
Total	334561	53.1



# New Morbidity: 0.9% of all Diagnoses

ICD	n	%
ADHD	1354	27.9
Anorexia	485	10
Lack of coordination	446	9.2
Disturbance of emotions specific to childhood	399	8.2
Other speech disturbance	372	7.7
Enuresis	353	7.3
Other or mixed emotional disturbances	200	4.1
Sleep disturbances	188	3.9
Tics	139	2.9
Total	3936	81.2

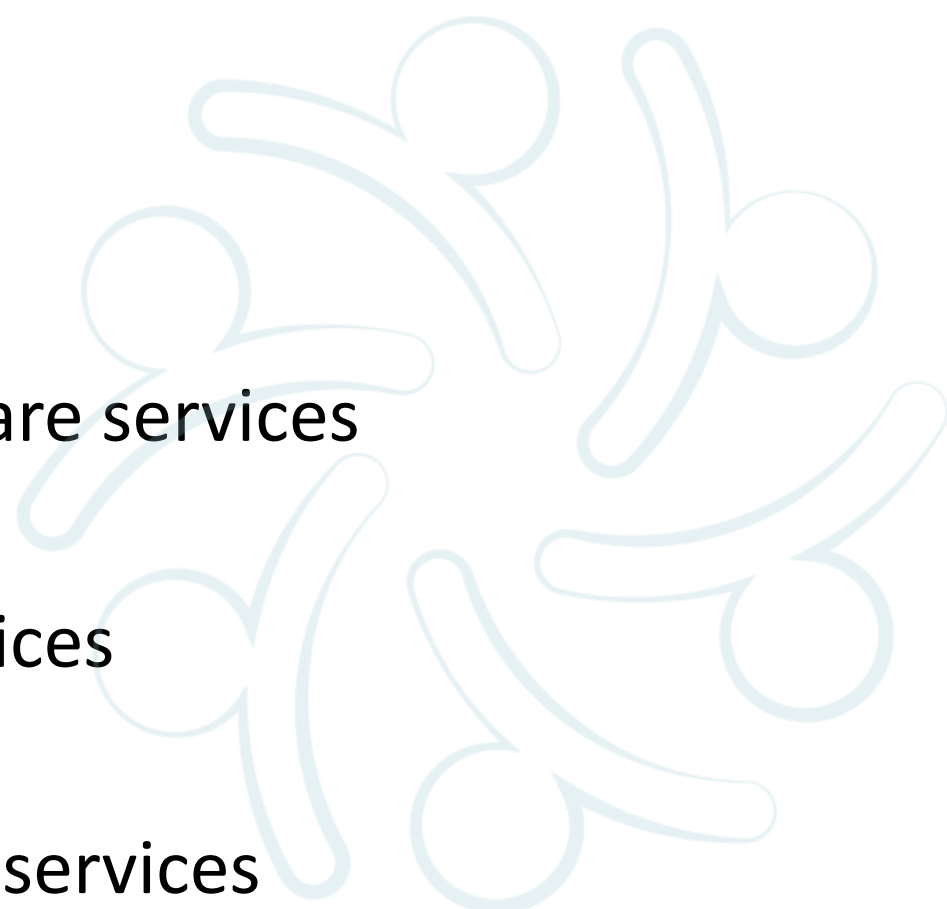


# Models of Child Care

- **Biomedical model** of disease causation
- ↓
- **Biopsychosocial models** influencing health (Engel)
- ↓
- **Lifecourse Health Development** – health development from before conception, continuing through the lifespan

# State of Health of the Child in Israel

- Low infant morbidity
- Speedy access to primary care services
- High level tertiary care services
- High quality maternal-child services



# Community Pediatrics in Israel

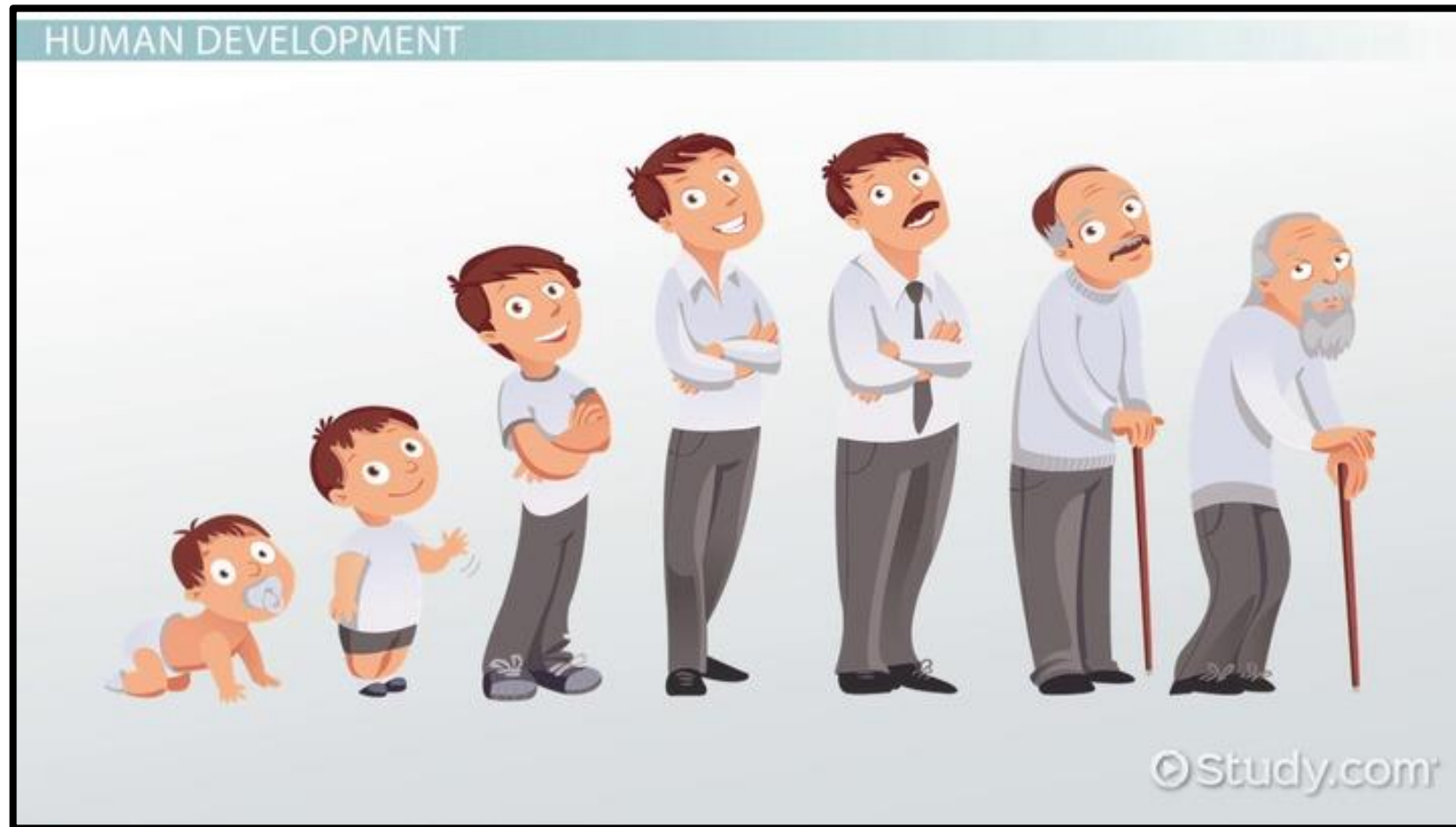
- Viewed as second class, low self esteem
- Controlled by the HMO's, not by academia
- Little attention to content of work or standards of delivery
- Preventive services separate from curative
- High volume, time limited
- Mainly acute, common problems
- Other problems referred to hospitals



# The Result

- High volume of primary care visits for mainly acute, self-limited disease
- High volume of referrals to tertiary care level hospitals and clinics, particularly to Child Development Centers
- Long waiting times

# The Life Course of Pediatrics



# Why Do We Need Developmental-Behavioral Pediatrics in Israel?



# What is Developmental Behavioral Pediatrics?

Developmental-Behavioral pediatrics advocates for an integrated approach to the biological, psychological, social, educational and cultural influences on children, youth, and their families.

# Developmental-Behavioral Issues

- Sleeping
- Eating
- Crying
- Behavior
- Parenting
- Hyperactivity
- School problems
- Motor problems
- Speech problems
- Enuresis and encopresis



Pediatrics

Neurology

Psychology

Behavior

Development

Psychiatry

# Child and adolescent mental health

- Worldwide 10-20% of children and adolescents experience mental disorders.
- Neuropsychiatric conditions are the leading cause of disability in young people in all regions.
- If untreated, these conditions severely influence children's development, their educational attainments and their potential to live fulfilling and productive lives.

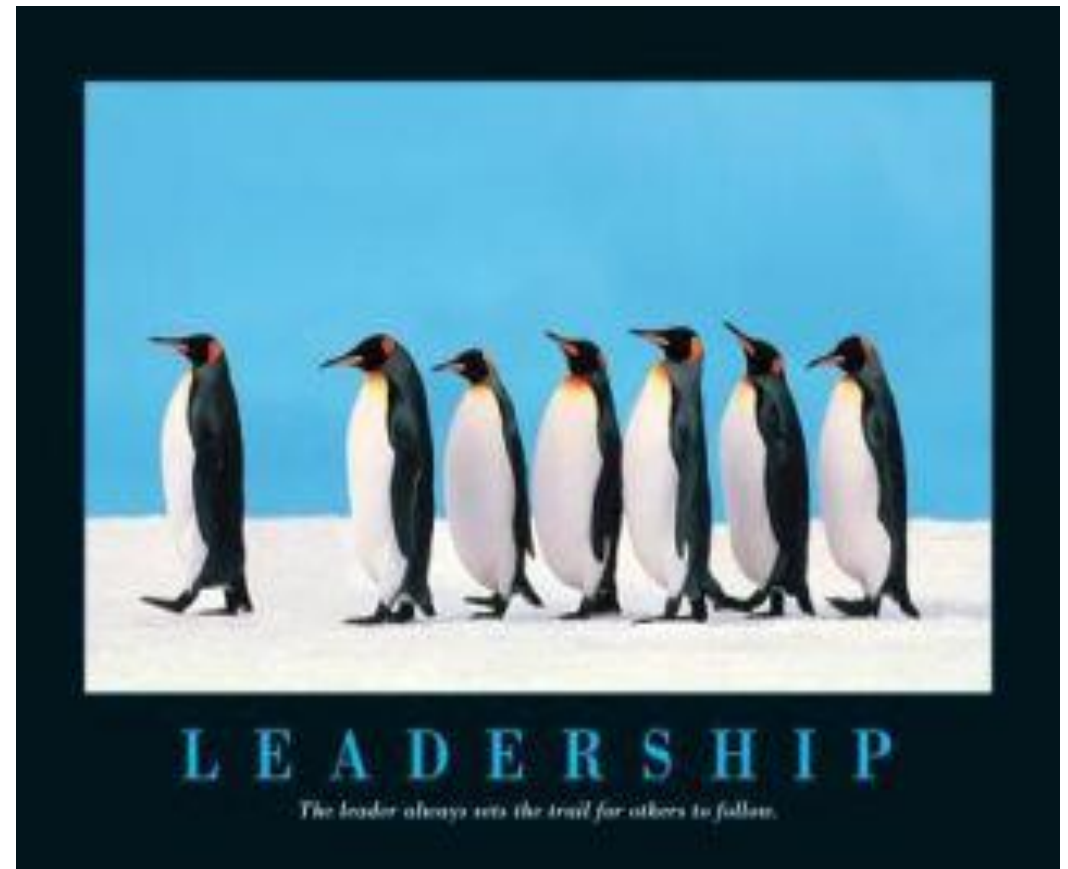
# Developmental- Behavioral Pediatrics

- Emphasis on *COMMON* issues related to child behavior and development
- Many are part of a normal range - but not understood as such by parents and professionals
- Overlap with education (ADHD, LD), psychiatry (autism, severe behavior problems), pediatrics (eating, sleeping, crying)



# My Heroes

- Robert Haggerty
- Walter Michel
- Stella Chess and Alexander Thomas
- Barry Zuckerman
- T Berry Brazelton
- Frank Oberklaid



# Uncle Bob

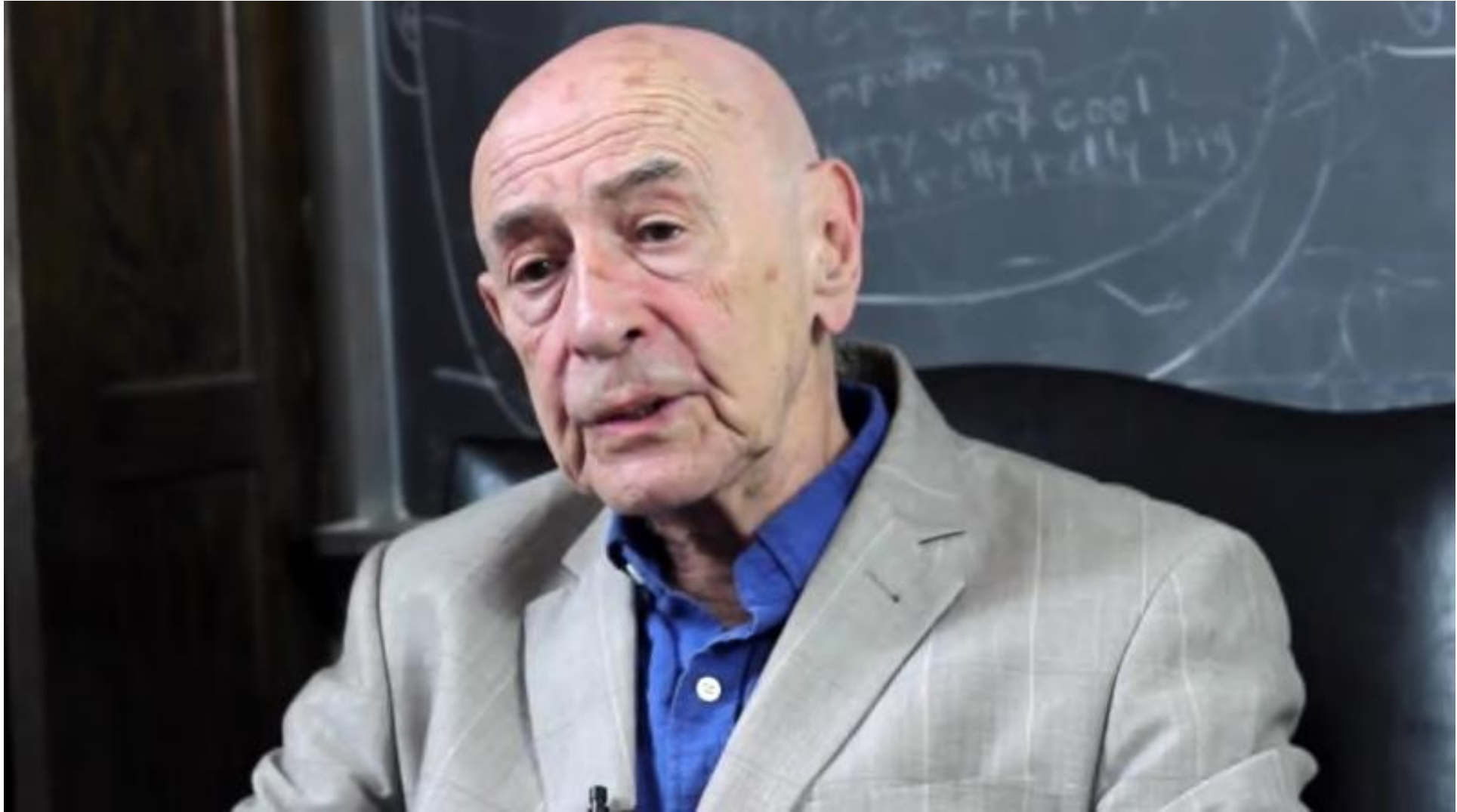


The visionary pediatrician Robert J. Haggerty, MD, originated the concept of "*new morbidities*" in the 1980s.

Dr. Haggerty observed that the most serious problems facing children over a century before were mainly infectious diseases and nutritional problems, the "*old morbidities.*"

These "*new morbidities*" are rooted in social difficulties, behavioral problems, and developmental issues, including, but not limited to crying, sleep problems, autism, enuresis, and ADHD

# Walter Mischel



# THE MARSHMALLOW TEST



# The Marshmallow Test

- Walter Mischel (Stanford psychology faculty)
  - children were offered a marshmallow, but if they waited (~15 min), they were given 2 treats
  - children who waited longer for greater rewards tended to have better life outcomes
    - SAT scores
    - educational attainment
    - body mass index
  - similar to grit(!)





The ability to delay immediate gratification for the sake of future consequences is an acquirable cognitive skill.

WALTER MISCHEL

# What did I learn from Walter?

Self-control, "grit" is a crucial part of "Readiness for School".

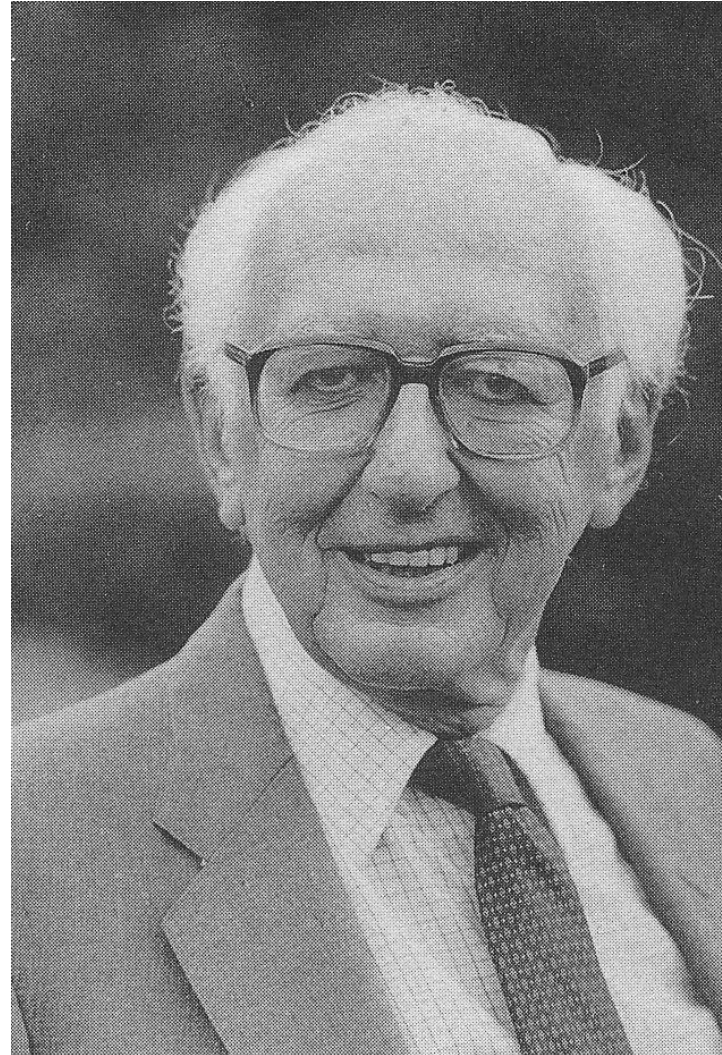
Includes planning how to solve a puzzle, learning to take turns in a game



A few days?...  
but I want it now!



# Stella Chess and Alexander Thomas





# Thomas & Chess



- Longitudinal study in the early 1950s regarding infant temperament
- Measured nine temperament characteristics each of which affects how well a child fits in at school, with their friends, and at home.
- Identified three types: easy, difficult, slow to warm up

(1)activity level (2)regularity-eating/sleeping/elimination (3)new object approach or withdrawal (4)Adaptability (5)sensitivity to stimuli (6)intensity of reaction (7)quality of mood (8) distractibility (9)attention span and persistence

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# Temperament and Child Rearing: The Goodness-of-Fit Model

- The **goodness-of-fit model**
    - Goodness-of-fit is an effective match between child-rearing environments and a child's temperament, leading to healthy adjustment.
  - Difficult infants are less likely than easy babies to receive sensitive care.
-

Neppl, Donnellan, Scaramella, Widaman, Spilman, et al. (2010) found stability of temperament from toddlers (24 months) to middle childhood (6 – 10 years).

This stability was found in positive and negative aspects of temperament and constraint.

# Arnold Sameroff



# The Transactional Model of Child Development (Sameroff 1975)

"The fundamental assumption of the transactional model is that development is facilitated by a **bidirectional, reciprocal interaction** between the child and his or her environment. "



# The Transactional Model

The **transactional model** (Sameroff and Chandler, 1974) is a useful framework with which to view the child and family in this highly dynamic period of **development**. ...

The **transactional model of development** assumes that infants, caregivers, and their environment determine the child's **developmental** and behavioral outcome.

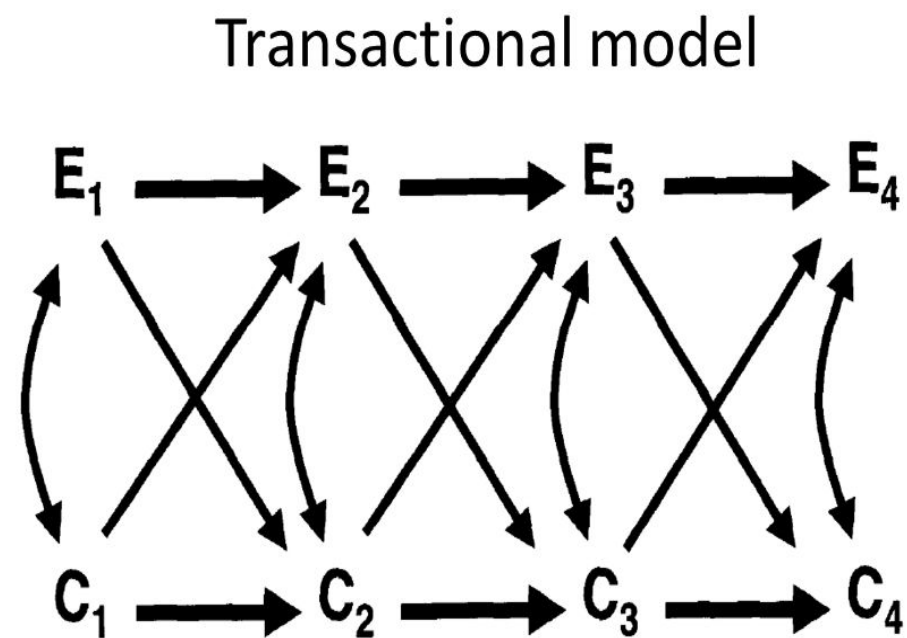
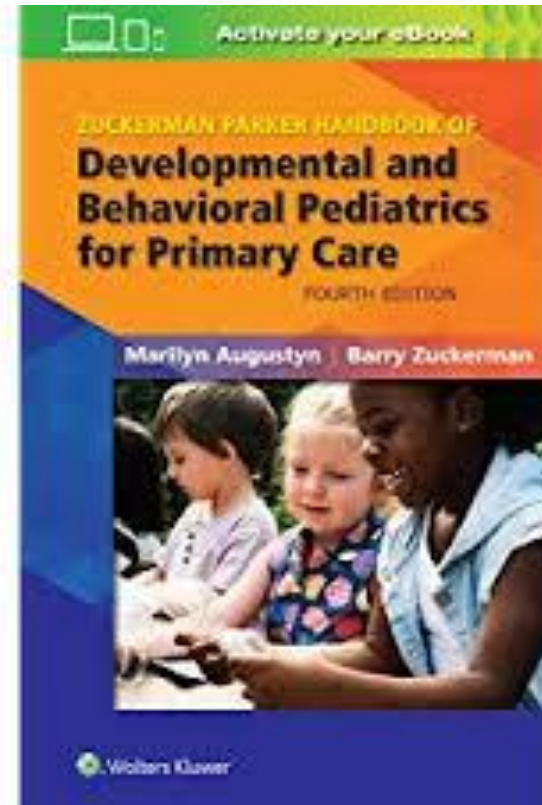


Figure 1.2. Transactional model with continuities in child and environment.

# Barry Zuckerman





# Reach Out and Read



- Reading is an important basis for language development and later learning
- Reading has developmental stages
- Television and smartphones cannot substitute for reading

- ✓ Reach Out and Read was founded in 1989 with its first program at Boston City Hospital (now Boston Medical Center).
- ✓ Today, Reach Out and Read partners with more than 5,800 program sites and distributes 6.9 million books per year.
- ✓ The program currently serves one in four children living in poverty in this country.

# Principles of Reach out and Read

- **Literacy-rich waiting rooms**
- **Anticipatory guidance**
- **A book to take home**



# The Mission

**Reach Out and Read prepares America's youngest children to succeed in school by partnering with doctors to prescribe books and encourage families to read together.**

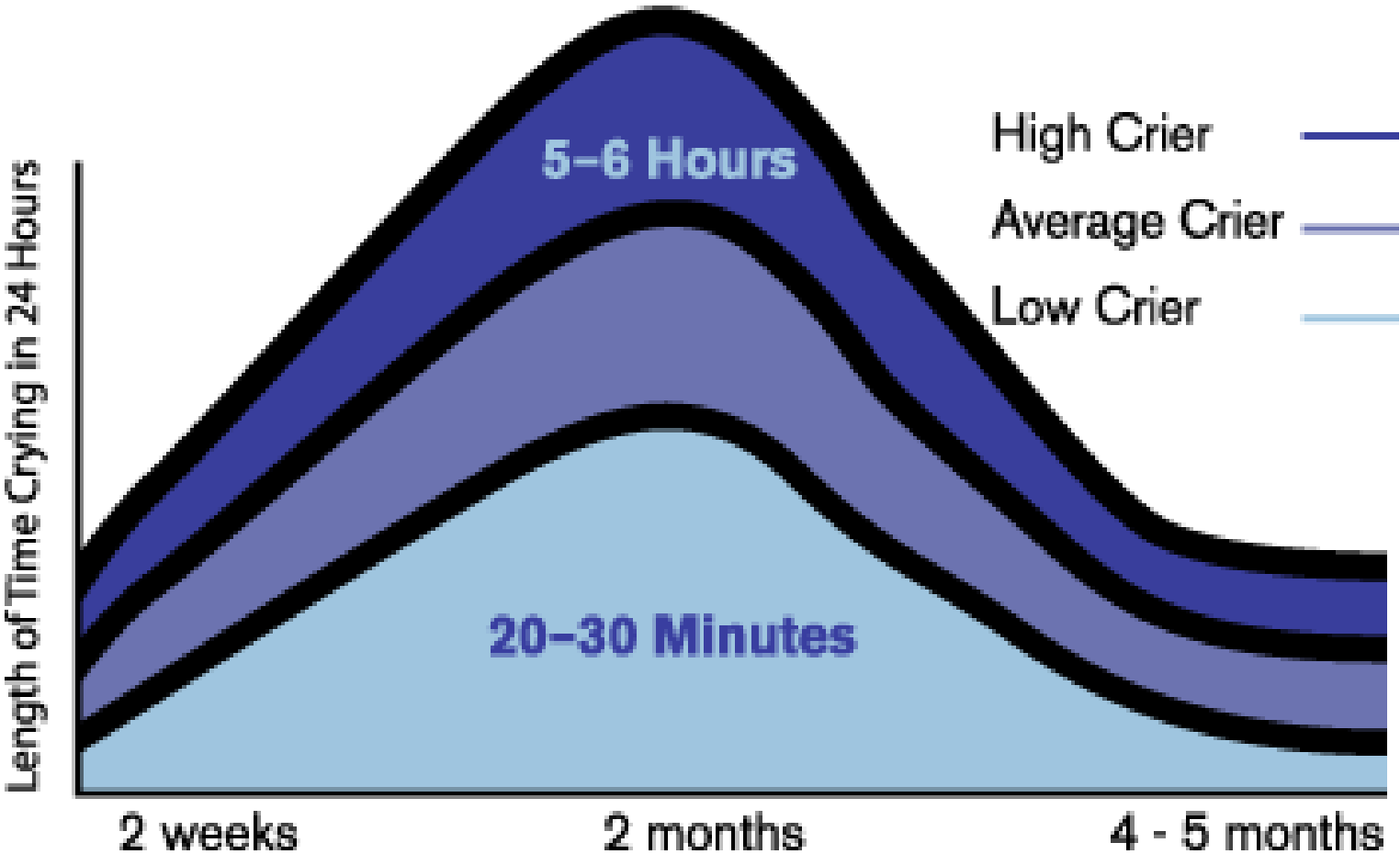


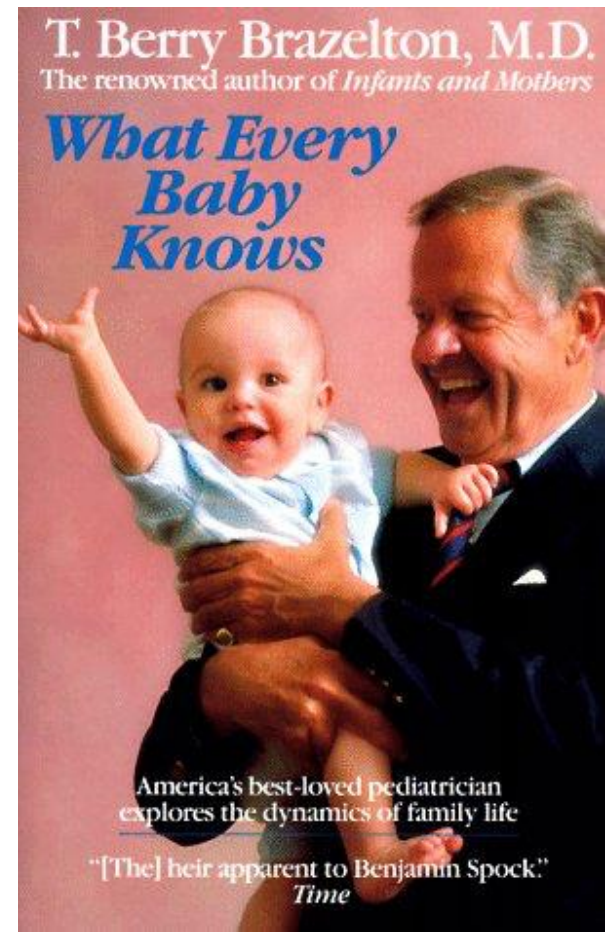
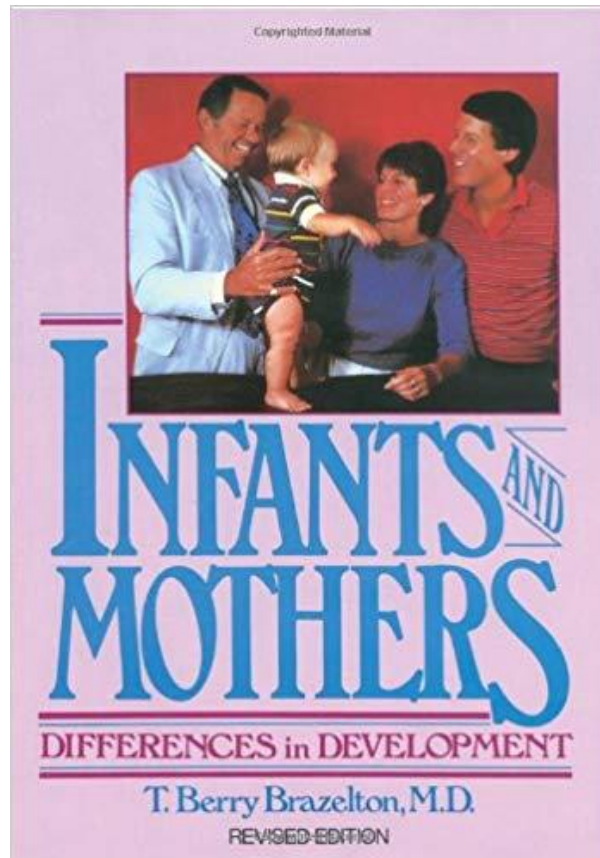
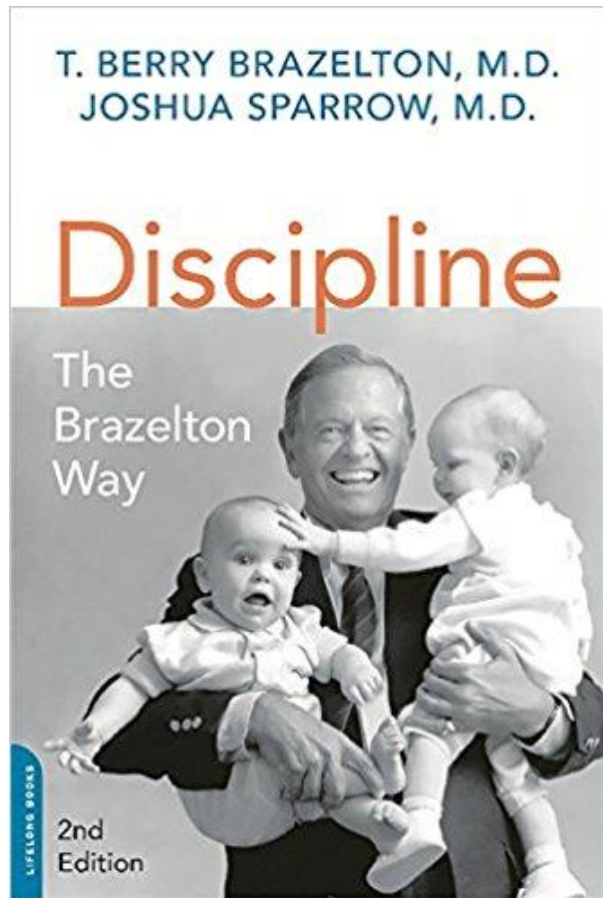
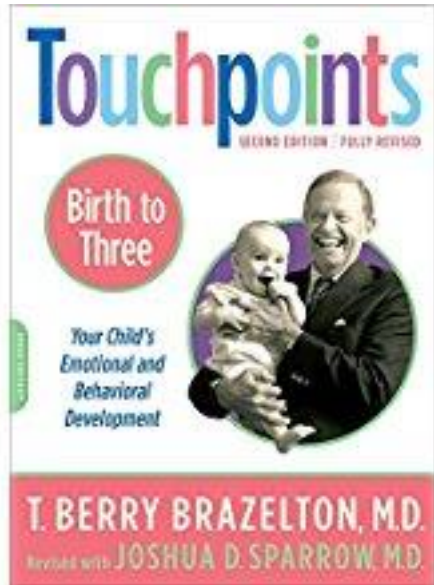
# T. Berry Brazelton



# Curves of Early Infant Crying

2 Weeks to 4 - 5 Months





# Frank Oberklaid



Professor  
Frank Oberklaid

Health  
in Early  
Childhood  
Settings

From Emergencies

**Why aren't we doing better in  
children's health and  
development? New approaches  
needed**

*Professor Frank Oberklaid  
Director, Centre for Community Child Health  
Cairns, July 14, 2017*



**Professor Frank Oberklaid**

Director of the Centre for Community Child Health at The Royal  
Children's Hospital Melbourne

**The Evidence – how Early Intervention helps children & society**

Celebrating  
30th

hospitals 2000



# What Have I learned from these Mentors?

- ❖ All parents need help with common behavioral and developmental issues
- ❖ Understanding Temperament and the "Goodness of fit" is helpful to pediatricians and parents
- ❖ Self-control ("grit") is an important predictor of later success
- ❖ Reading books is an important developmental task
- ❖ There are always positive aspects of development to stress to parents

# The Missing Piece

**Primary Care Pediatric Clinic**



**Tertiary Care Hospital  
or CDC**



# The Goshen Vision

- To adapt pediatric specialty training to include a wide range of COMMON behavioral and developmental issues
- To provide similar training for pediatricians working in the community
- To connect pediatricians to other professionals working with children, in education and welfare and independent activities
- To translate scientific base to advocacy for children

# The Goshen Project

The central aim is to increase the ability of all pediatricians to identify and manage a wide range of problems related to developmental and behavior issues.

# The Challenges

- Adding development and behavioral issues to general pediatric training
- Create "secondary level" track for pediatricians with training in developmental-behavioral issues
- Increasing pediatrician's role as translator for child advocacy
- Improving pediatricians ability to work with other professionals in health, education and welfare

# **Encopresis:** repeated passage of stool in inappropriate places in a child > 4 years

- Usually in < 7 years
- 90% due to Functional Constipation
- Usually no underlying psychopathology
- Rare organic causes



# Management of Encopresis

## Management:

- Psychoeducation
- Initial cleanout: PEG, Fleet
- Maintenance dose of PEG – titrate dose with stools
- Regular sitting time



# Temper Tantrums

- 50-80% of 2-3 year olds weekly
- 60% continue at 3-4 years
- Normal development
- Difficult temperament
- Poor parenting: no limits, unrealistic expectations





# Management of Temper tantrums

- Allow choices
- Identify triggers (hungry, overtired)
- Provide predictable routines
- Adjust for temperament
- Ignore where possible
- Time-outs
- Be consistent (mother vs father)



# ENURESIS



# Enuresis

- **Nocturnal** - > 6 years
  - Decreased functional bladder capacity
  - Heavy sleepers?
- **Diurnal** - > 6 years
  - Micturition deferral
  - ? Abnormal sphincter control

- **Treatment Strategies:**
  - Alarms
  - Medication – Desmopressin acetate
    - Imipramine
  - Bladder stretching exercises
  - Star charts
  - Child empowerment
  - **DO NOT PUNISH!**

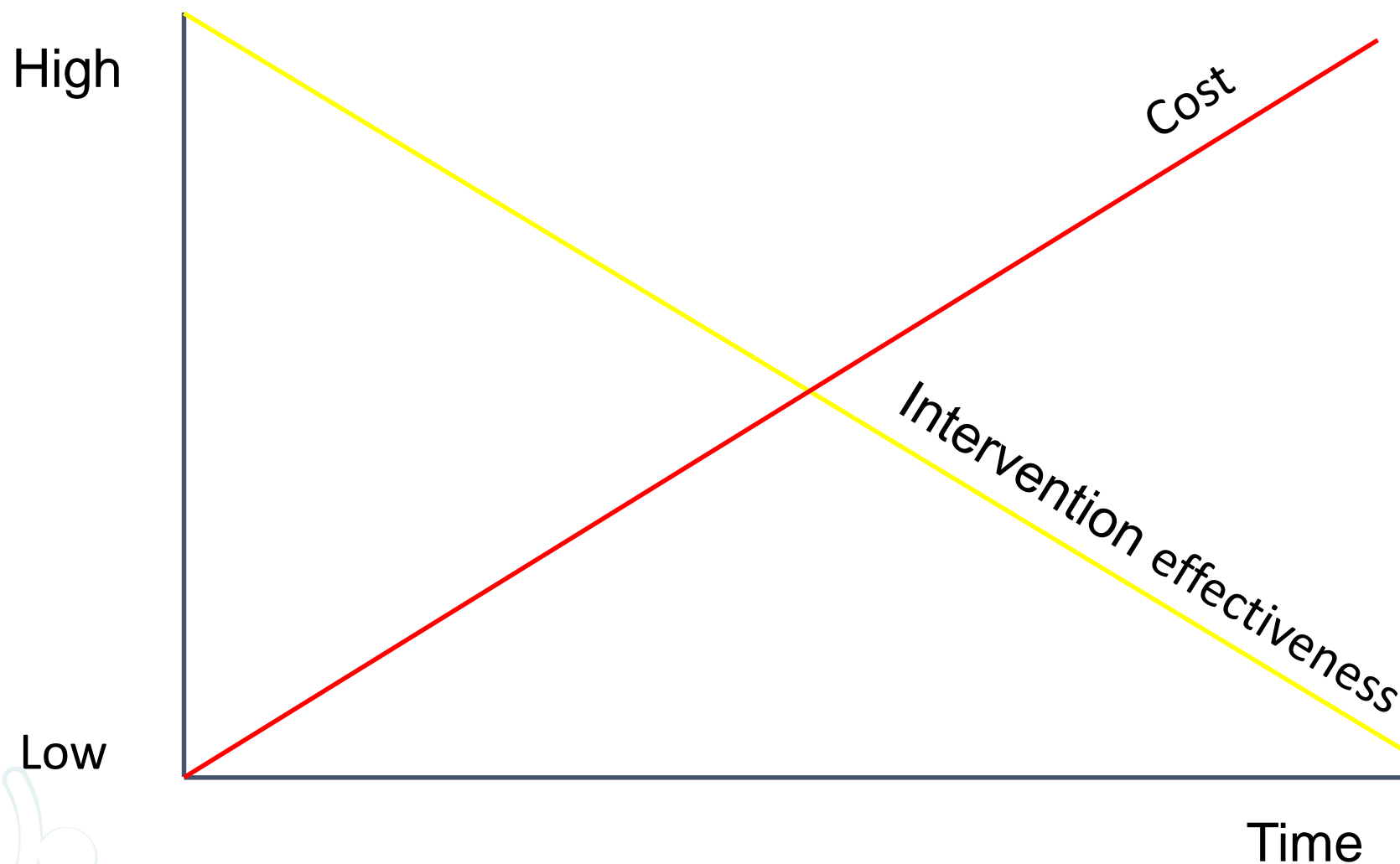
# Parenting



# All Parents Need Help...

- Listen
- Observe
- Look for the positive
- Advise regarding the negative
- We can all be parent supporters





**Intervention effects and costs of social-emotional mental health problems over time (*Bricker*)**



# Child Development and Primary Care

1. Parents' reports of current skills and concerns using a checklist (approaches standards of formal screening tests).
2. Developmental screening was most accurate when done at 9 months and two years of life.
3. Temperament discussion should be part of well child care – recommended at 4 months as routine.
4. Enhancing maternal child interactions (talking to the child, how to react to problem behaviors, reading to the child) are more important than teaching knowledge of child development.
5. Use of specific intervention techniques for common behavior issues: sleep problems and excessive crying.

Ref: Regalado and Halfon: Primary Care Services: Promoting Optimal Child Development from Birth to Three Years. Commonwealth Fund, September 2002.

# I Believe...

- We should all be basic experts in developmental-behavioral pediatrics
- Every contact is an opportunity for change
- Empower parents
- Empower children
- Believe in what we do



# Thank You!!



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FISCHME!!

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"ARE YOU READY TO SEE THE JOHNSON CHILD NOW, DOCTOR?"

# Building Strong Foundations

Getting the foundations right is important – healthy brain development is a prerequisite for future health and wellbeing.

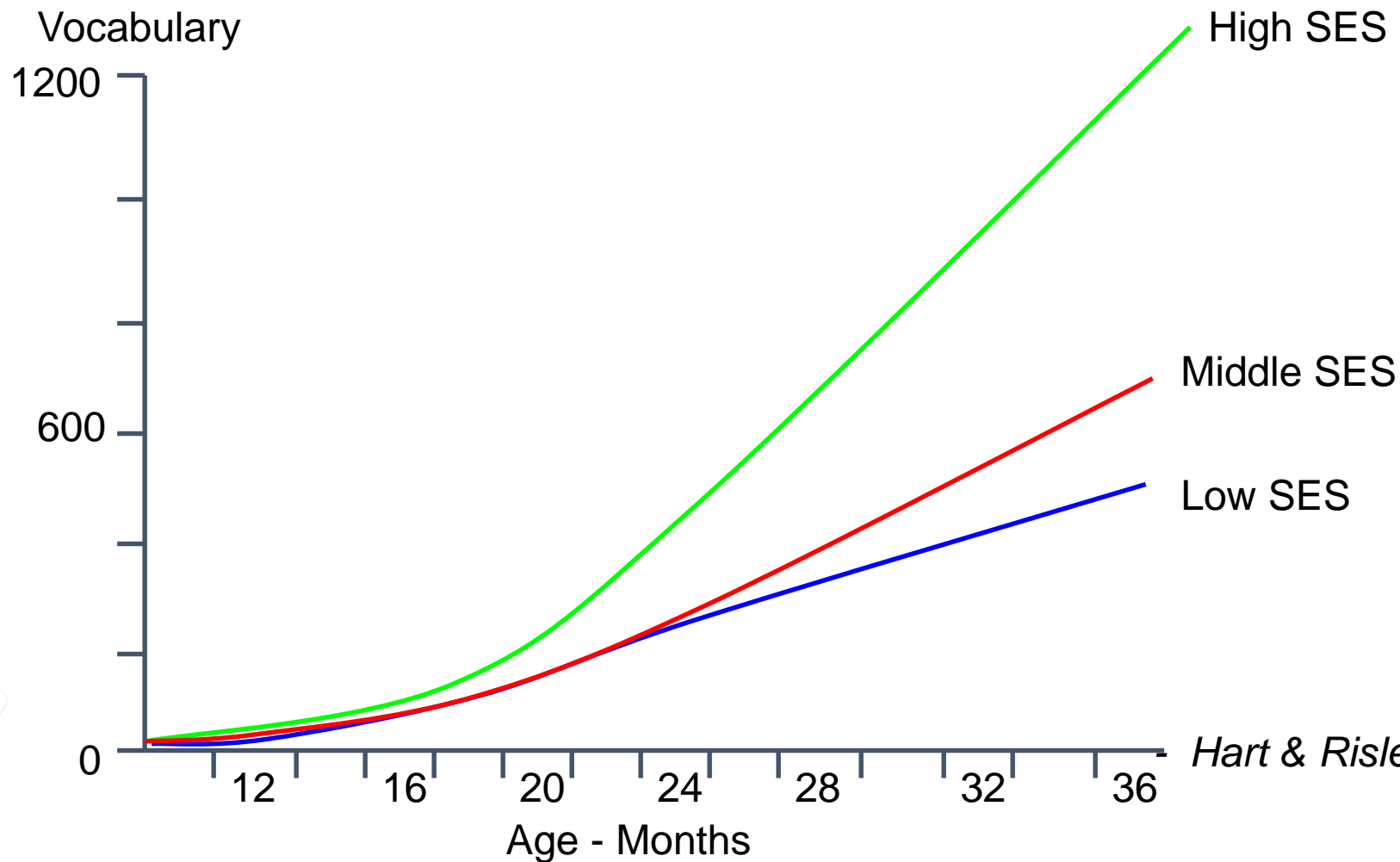
The early years of a child's life are critical in impacting on a range of outcomes through the life course.



# The Neuroscience of Brain Development (Pathways to Problems)

- Brain architecture and skills are built in a hierarchical '**bottom-up**' sequence
- **Foundations important** - higher level circuits are built on lower level circuits
- **Skills beget skills** - the development of higher order skills is much more difficult if the lower level circuits are not wired properly
- **Plasticity of the brain decreases over time** and brain circuits stabilise, so it is much harder to alter later
- It is **biologically and economically** more efficient to get things right the first time

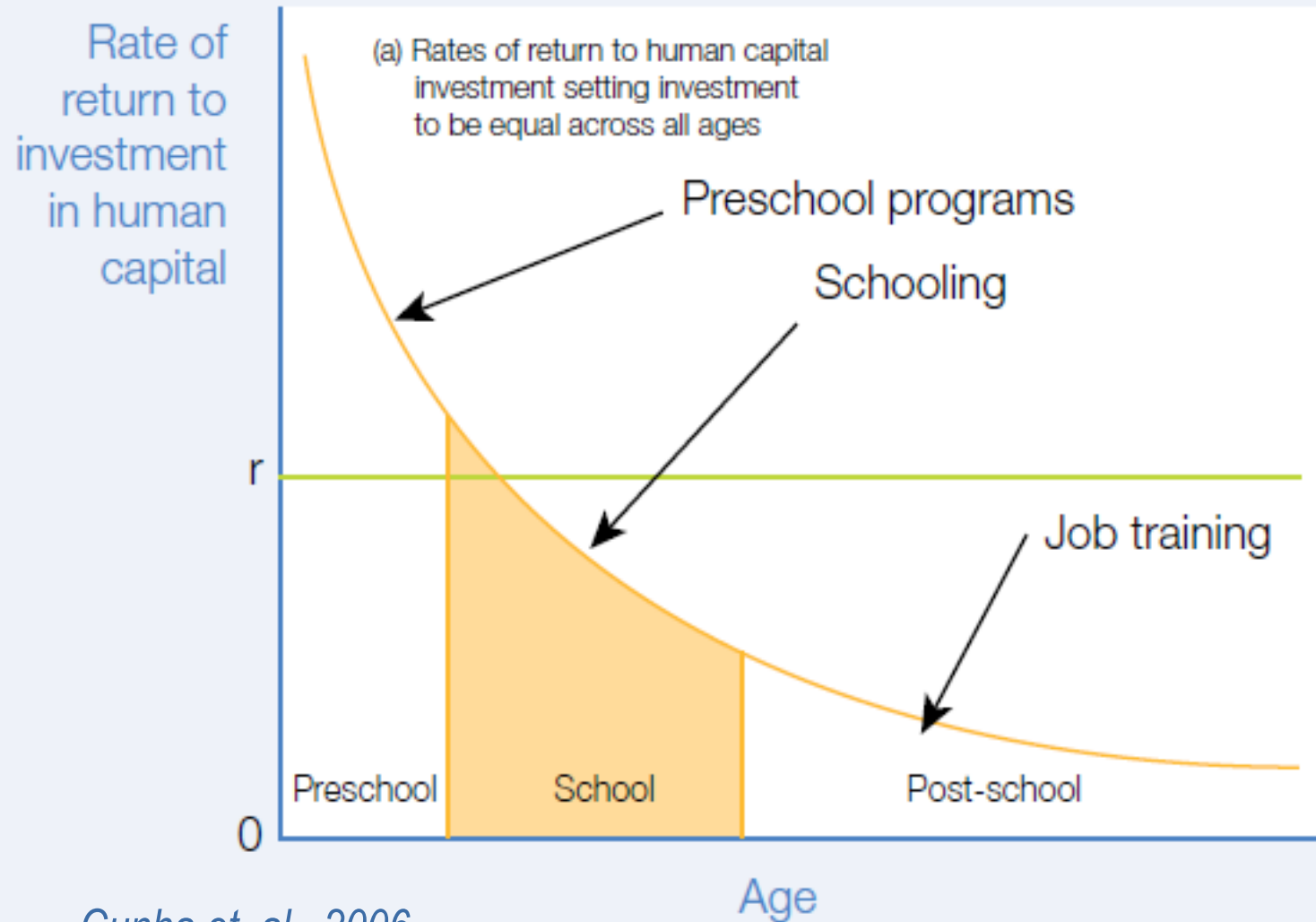
# Vocabulary growth - first 3 years



Hart & Risley 1995

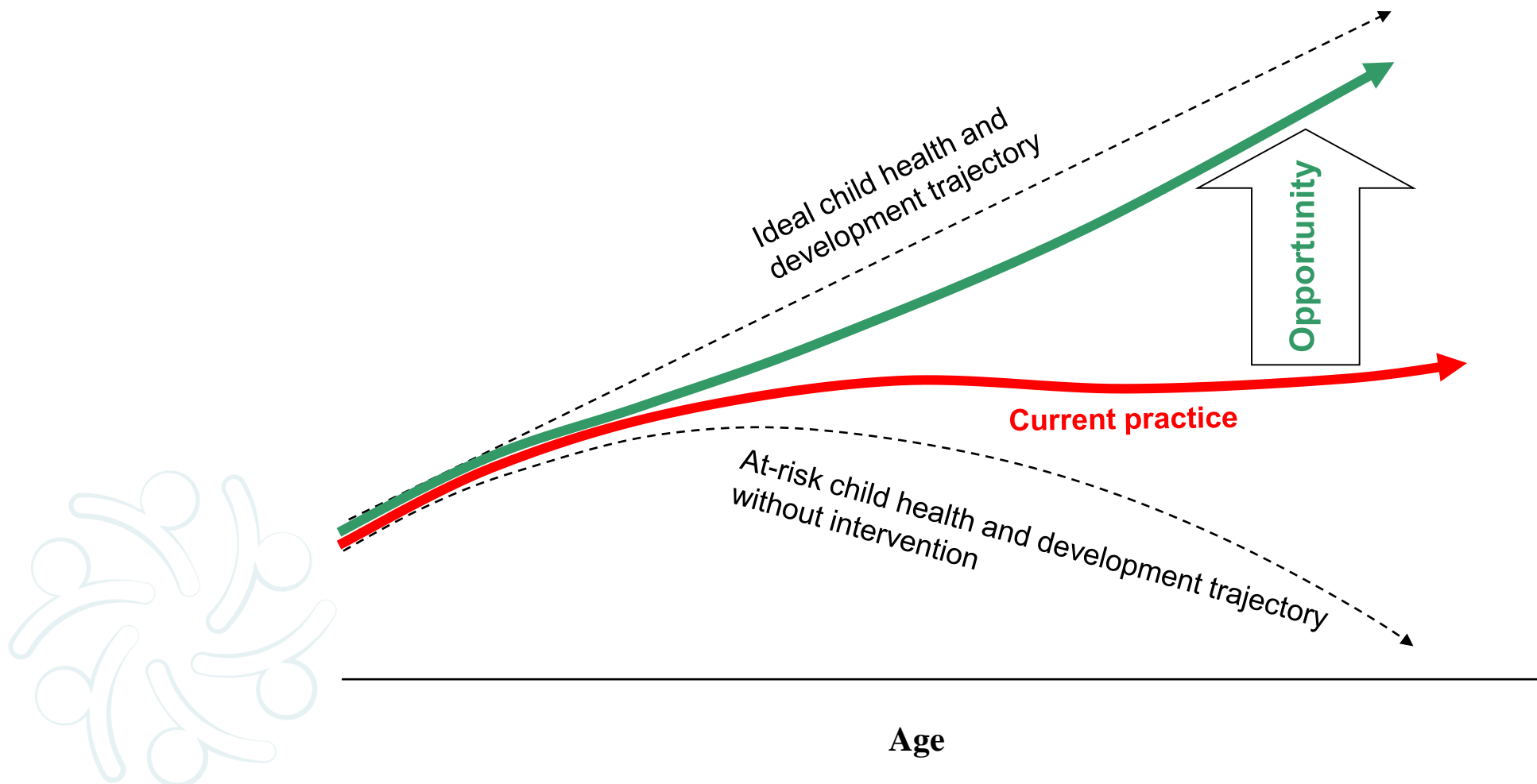


# Return on Investment in the Early Years



- Cunha et. al., 2006.

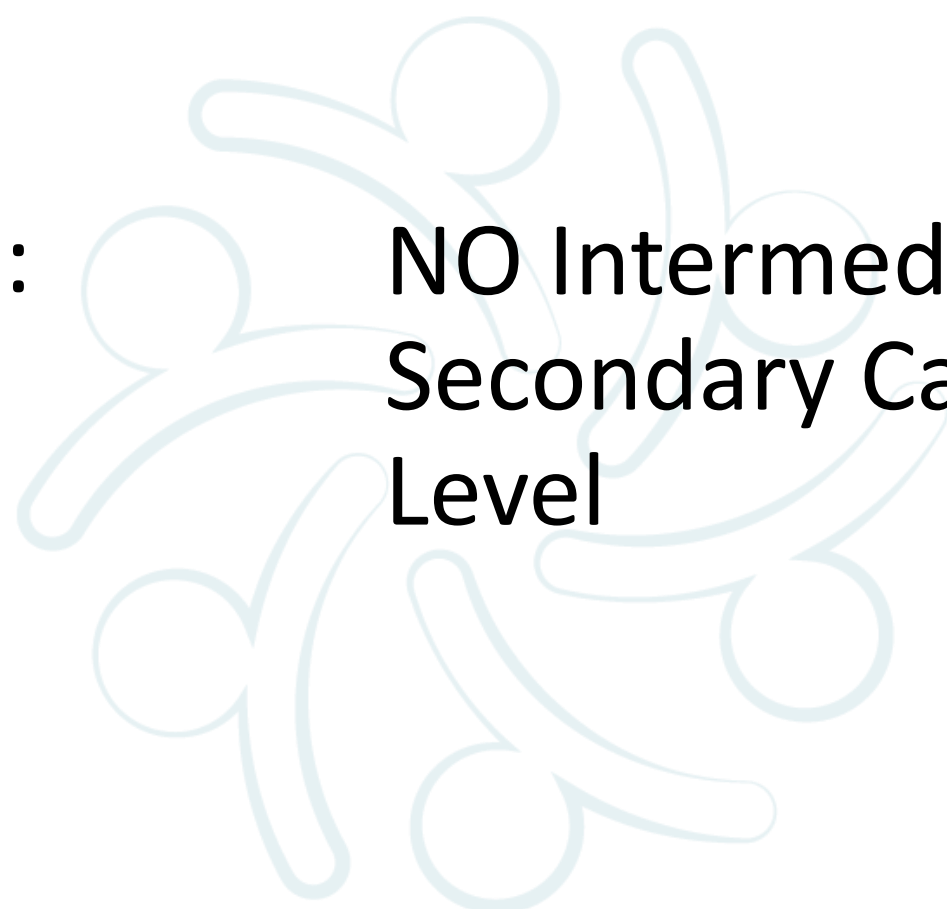
# Developmental Health - Aims



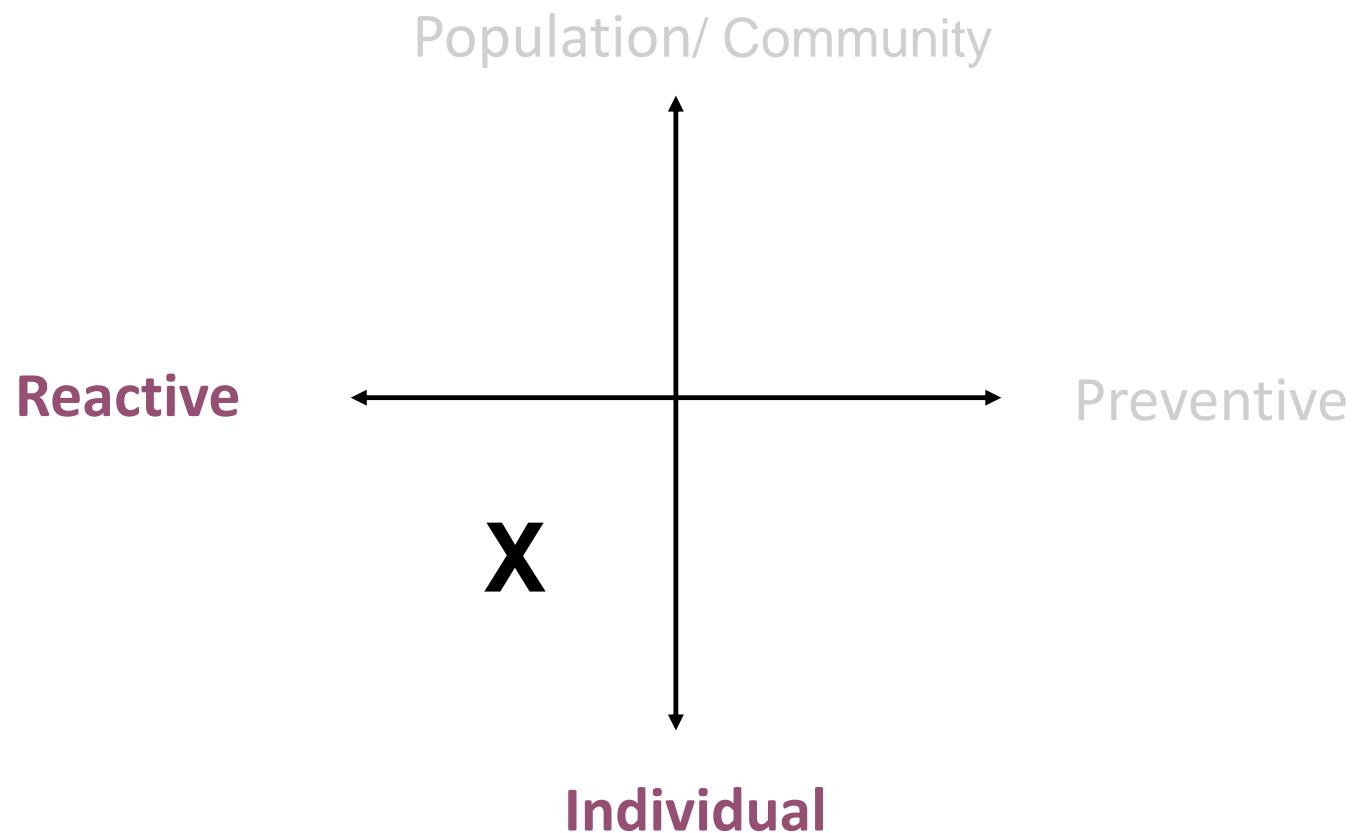
# The Service Problem

Pediatric Care in Israel :  
Primary or Tertiary  
Care Based

NO Intermediate  
Secondary Care  
Level



# Current Approach





# Population Focus

