

EARLY CHILDHOOD SUPPORT

- COMMUNITY PEDIATRICS
- COLUMBIA UNIVERSITY





EARLY CHILDHOOD SUPPORT

- A recent explosion of research in neurological, biological, behavioral, and social science has led to major advances in understanding whether children get off to a promising or a worrisome start in life

Young Children at Risk

2-4%
Severe
Disabilities

10-14%
Special Health
Care Needs

30-40%
Behavioral,
Mental Health
Learning
Problems

60-70%
Good Enough



EARLY CHILDHOOD SUPPORT

- The capacity to use this knowledge constructively has been constrained by a number of transformations in the social and economic circumstances under which families with young children are living in the United States.

Some examples of these transformations in circumstances include:

- 1) Increased parents working, greater difficulties balancing workplace and family responsibilities.
- 2) Continued high levels of economic hardship among families
- 3) More children in childcare (variable quality) starting in infancy
- 4) Increasing cultural diversity and persistent racial and ethnic disparities in health and developmental outcomes
- 5) Greater awareness of negative effects of stress on young children, particularly as result of serious family problems and adverse community conditions



Objective

- By the end of this discussion and your experiences over the next few weeks, you will understand the importance of **early childhood support** in optimizing child and family health.



What Is Meant by “Early Childhood”?

- Some define as birth through 3 years - LIMITED DEFINITION
- BETTER DEFINITION
- prenatal through approximately age 5 years
- “conception to 1st day of kindergarten”



Why the Focus on Early Childhood?

- These early years are most critical for brain development
 - a “window of opportunity”
- Create the foundation for all developmental domains
 - movement, communication, social and emotional capabilities, and intellectual functioning



Neuroscience of Brain Development

- Brain is not mature at birth
- Brain is changed by experiences
- Critical periods imply timing is important
- Relationships program social emotional function
- Adversity impacts brain development



Brain Is Not Mature at Birth

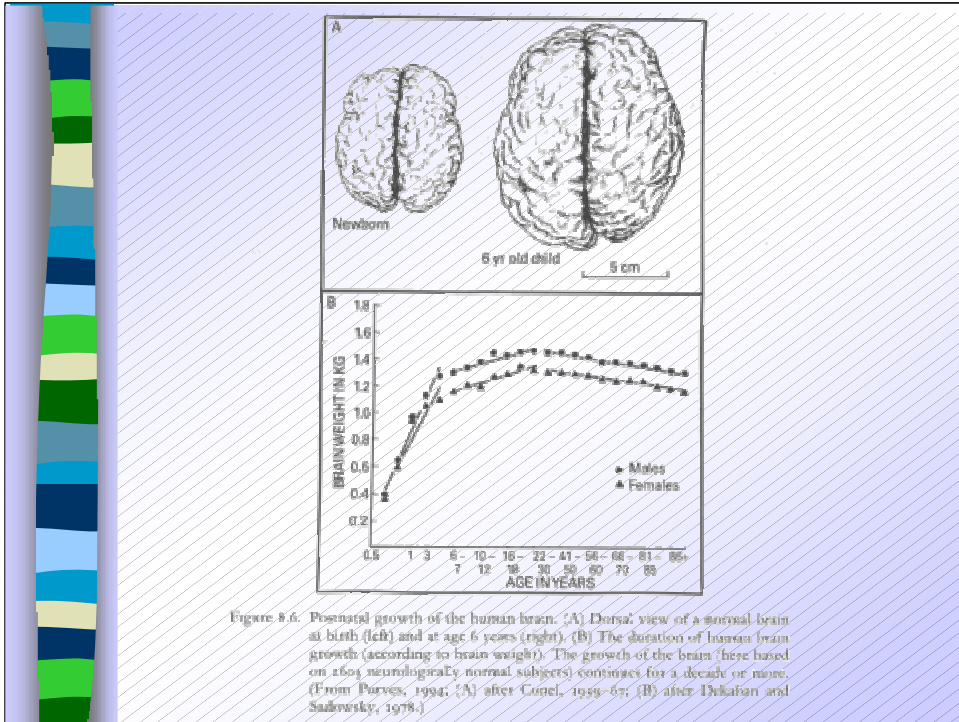


Figure 8.6. Postnatal growth of the human brain. (A) Dorsal view of a newborn brain at birth (left) and at age 6 years (right). (B) The duration of human brain growth (according to brain weight). The growth of the brain (here based on 1664 neurologically normal subjects) continues for a decade or more. (From Purves, 1994; (A) after Conel, 1959-67; (B) after Delkaban and Sulzowsky, 1978.)

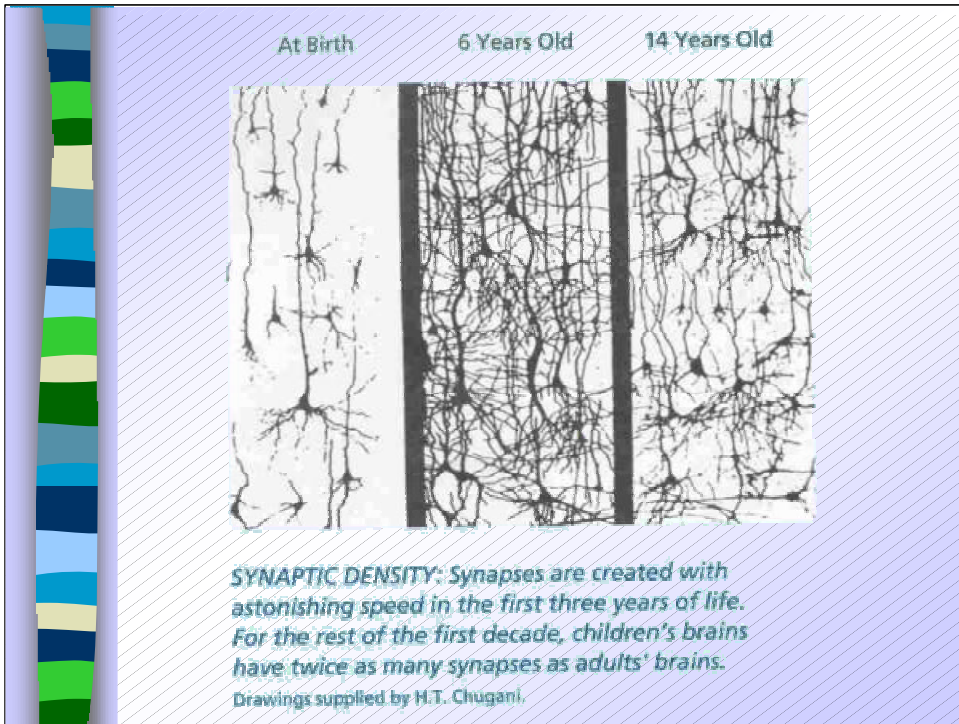
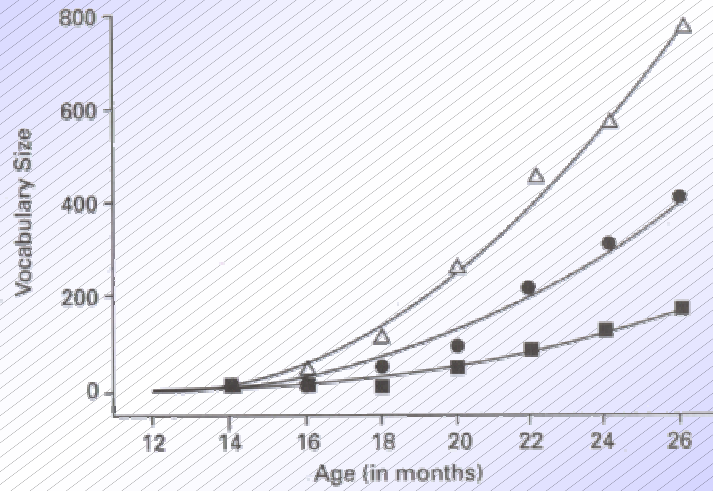


Fig 1. Vocabulary size in three children from 14 to 26 months of age.



Copyright © 1991 by the American Psychological Association. Adapted with permission, Huttenlocher J. et al. Early vocabulary growth: relation to language input and gender. *Developmental Psychology*. 1991;27:236-248.



Nature Vs. Nurture

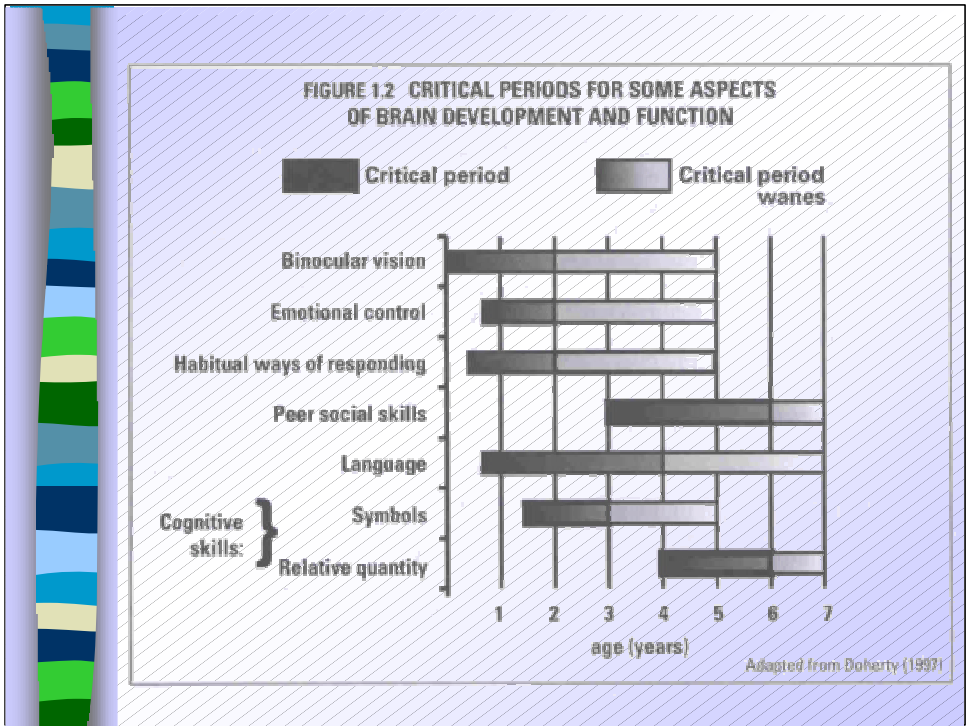
- Not independent influences
- Complex interaction between a child's individual biological endowment and the challenges and supports provided by the caregiving and physical environment
- A dynamic and continuous interaction between biology and experience



Brain Is Changed By Experiences



Critical Periods
Imply Timing Is
Important





Relationships Program Social Emotional Function

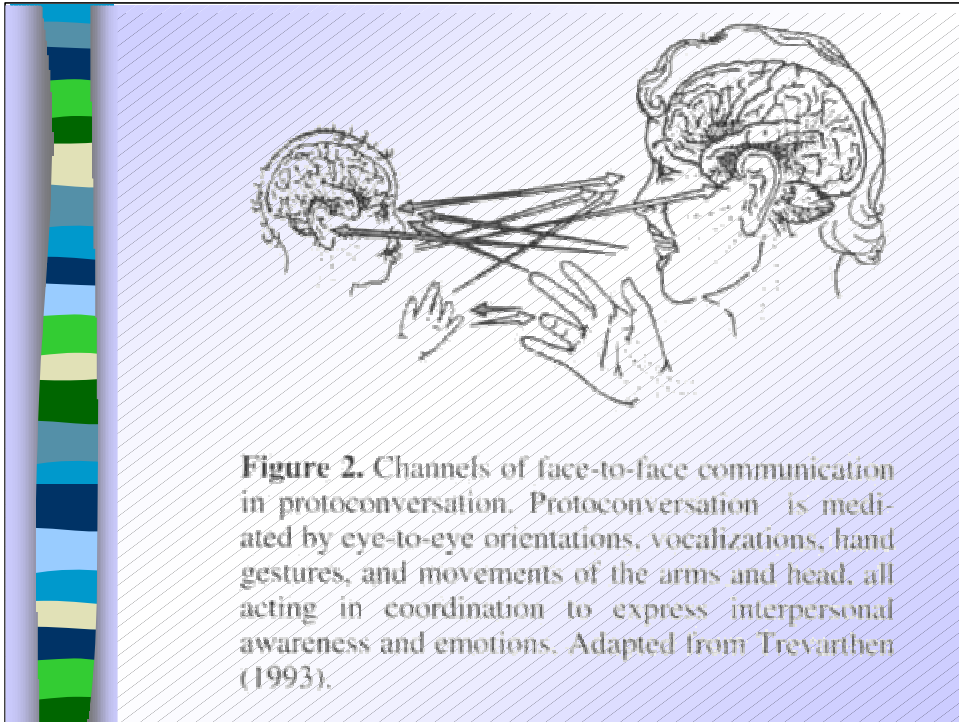


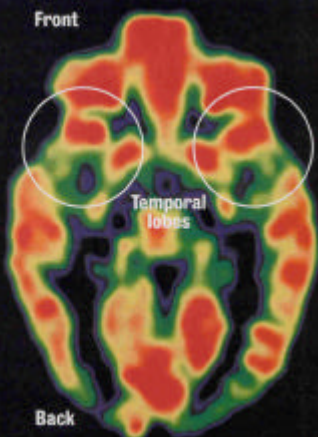
Figure 2. Channels of face-to-face communication in protoconversation. Protoconversation is mediated by eye-to-eye orientations, vocalizations, hand gestures, and movements of the arms and head, all acting in coordination to express interpersonal awareness and emotions. Adapted from Trevarthen (1993).



Adversity Impacts Brain Development

Healthy Brain

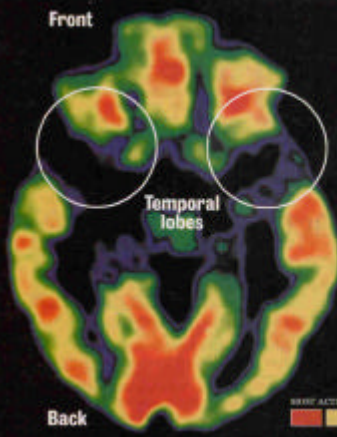
This PET scan of the brain of a normal child shows regions of high (red) and low (blue and black) activity. At birth, only primitive structures such as the brain stem (center) are fully functional. In regions like the temporal lobes (top), early childhood experiences wire the circuits.



An Abused Brain

An Abused Brain

This PET scan of the brain of a Romanian orphan, who was institutionalized shortly after birth, shows the effect of extreme deprivation in infancy. The temporal lobes (top), which regulate emotions and receive input from the senses, are nearly quiescent. Such children suffer emotional and cognitive problems.



VERY ACTIVE LEAST ACTIVE
[Red] [Yellow] [Green] [Blue] [Black]



Cultural Influences

- Culture influences every aspect of human development and is reflected in childrearing beliefs and practices



IMPORTANT TO REMEMBER

- What happens during the first months and years of life matters a lot
- Not an indelible blueprint for adult well-being
- But ... sets either a sturdy or fragile stage for what follows



Disparities in Development

- Disparities in Development
 - Multiple determinants
 - Begin Early
 - Compounded over life course
 - Affected by psychosocial relationships
 - Are the product of 1st order response (individual) to 2nd order (family, school, work) and 3rd order effects (community, policy)



Important Influences on Child Health and Well-being

- Poverty
- Parental Health and Well-Being
- Nutrition (both mother and child)
- Child Care
- Others



Poverty

- Almost 25% of America's children < 3 years of age live in poverty
- Being poor and having insufficient resources are the best predictors of poor health outcomes for children
- These children face a greater risk of impaired brain development due to their exposure to a number of risk factors associated with poverty
- Children from disadvantaged backgrounds start school one year behind and do not catch up



Parental Health and Well-being

- The primary psychological task of infant development in the first year of life is the formation of a secure, emotional bond with the caregiver
- The achievement of this bond provides the foundation for the child's gradual development of emotional regulation



Parental Health and Well-being: Negative Influences

- A significant number of young children are burdened by such problems as:
 - *Maternal substance abuse*
 - *Exposure to violence*
 - *Maternal depression, other psychiatric conditions*



Maternal Depression

- Common
- Higher rates in inner city, poor, single mothers
- Multiple impacts
- Treatable



Infants of Depressed Mothers

- Shorter attention spans
- Less motivation to master new tasks
- Elevated heart rates
- Elevated cortisol
- Reduce EEG activity right frontal cortex



Nutrition

- Good nutrition is essential for pre and postnatal health
- Breastfeeding known to be of great benefit
- Children deprived of proper nutrition during the brain's most formative years score much lower on tests of vocabulary, reading, comprehension, arithmetic, and general knowledge



Child Care

- Daily interaction plays an important role in a child's emotional and mental development
- Much of the child care available in the US is highly fragmented and characterized by marked variation
- The burden of poor quality and limited choice rests most heavily on low-income, working families



Interventions - Do They Make a Difference?

- The course of development can be altered in early childhood by effective interventions that change the balance between risk and protection, thereby shifting the odds in favor of more adaptive outcomes



Interventions - Do They Make a Difference?

- Model early childhood programs that deliver carefully designed interventions with well-defined objectives and that include well-designed evaluation have been shown to influence the developmental trajectories of children whose life course is threatened by socioeconomic disadvantage, family disruption, and diagnosed disabilities.



Intervention - Example

- Early Intervention
 - Targeted, federally mandated entitlement for any child 0 - 3 years old with any developmental delay
 - Provides extra support in whatever area(s) a child demonstrates delay



Intervention - Example

- Home Visitation (e.g. Best Beginnings)
 - Provides social support and ongoing parental education (prenatally and through early childhood)
 - Home visits made by trained community workers, nurses (occasionally MDs)
 - Can be universal or targeted
 - Research has supported the effectiveness of such programs



Family-centered Practice

- Has emerged within several disciplines as a philosophy and approach for addressing the needs of vulnerable children and families
 - Home-visitation is an example of this
- Recognizes that most families are able and committed to raising their children
- In contrast to child-centered or deficit models - the family is the unit of attention, focuses on strengths, and places high value on informed family choice



Intervention -Example

■ Head Start

- Federally funded program for low-income children age 3-5 years
- Comprehensive services, usually in a pre-school setting, with an emphasis on parent involvement
- Goal: improve cognitive, intellectual and social development, physical health, and adequate nutrition
- Not fully funded - only about 1/3 of eligible children are enrolled
- In other countries, similar services available universally



Intervention - Example

- WIC

- Federally funded nutrition supplementation and counseling for low income pregnant women and children 0 - 5 years of age
- Given based on income and after age 9 months, on high risk for poor nutrition
- Uses federally subsidized dairy products



Primary Prevention

- Anticipating the potential problems and giving support before they surface
- Many of the above-mentioned interventions use this concept (e.g. Best Beginnings)
- Pediatrics: some examples
 - ensure every child has a medical home
 - prenatal visits
 - breastfeeding education and support



Service Learning

- As you participate in each service learning experience, reflect upon how that community organization is using the concept of early childhood support to improve child and family health.



SUMMARY

- The early childhood years are key
- Early relationships have a central role as a source of either support and adaptation or risk and dysfunction
- We **DO** have the capacity to increase the odds of favorable developmental outcomes through planned interventions.