

Nati per
Leggere

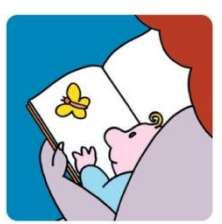
NATI PER LEGGERE

Nati per leggere:
A national programme to enhance literacy and health in
small children through reading aloud

Raising a Nation of Readers: IFLA Satellite Meeting
Rome, 19 August 2009

Stefania Manetti
Gruppo nazionale di coordinamento Nati per leggere

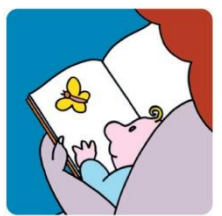
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Reading aloud promotion

- To sustain competent parenting
- Language development
- Learning reading and writing
- Early evidence based intervention
- Important tool for paediatricians : improves daily work with parents.

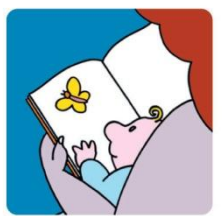


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NpL and competent parenting

“Competent parenting makes a better human society”

(Winnicott, Bowlby, Bettelheim)



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"NpL and competent parenting"

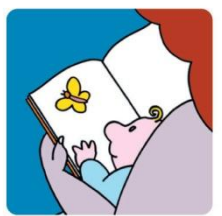
- Strong interdependence between the development of competent parenting and child physical and psychological development :

What are we really talking about?

Winnicott's positive holding environment:

"Nobody has to teach a mother , or advise her but...

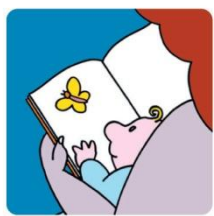
...as paediatricians we can create a psychological holding conditions so that she feels free to explore her own basic repertoire of maternal behaviour and try them out with a certain amount of confidence"



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Not only paediatricians..

..but **also** paediatricians because they have a regular and continuous contact with families which starts at birth or even before and most important all families of any social level in Italy have a family paediatrician.



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Recommendations for Preventive Pediatric Health Care (RE9535)

Committee on Practice and Ambulatory Medicine

Each child and family is unique; therefore, these Recommendations for Preventive Pediatric Health Care are designed for the care of children who are receiving competent parenting, have no manifestations of any important health problems, and are growing and developing in satisfactory fashion. Additional visits may become necessary if circumstances suggest variations from normal.

These guidelines represent a consensus by the Committee on Practice and Ambulatory Medicine in consultation with national committees and sections of the American Academy of Pediatrics. The Committee emphasizes the great importance of continuity of care in comprehensive health supervision and the need to avoid fragmentation of care.

AGE ^a	INFANCY ^a											EARLY CHILDHOOD ^a				MIDDLE CHILDHOOD ^a				ADOLESCENCE ^a										
	PRENATAL ¹	NEWBORN ²	2-4d ³	By 1mo	2mo	4mo	6mo	9mo	12mo	15mo	18mo	24mo	3y	4y	5y	6y	8y	10y	11y	12y	13y	14y	15y	16y	17y	18y	19y	20y	21y	
HISTORY Initial/Interval	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
MEASUREMENTS Height and Weight Head Circumference Blood Pressure		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
SENSORY SCREENING Vision Hearing		S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	
DEVELOPMENTAL/ BEHAVIORAL ASSESSMENT⁴	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
PHYSICAL EXAMINATION⁵	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
PROCEDURES-GENERAL⁶ Hereditary/Metabolic Screening ¹¹ Immunization ¹² Hematocrit or Hemoglobin ¹³ Urinalysis		←•••→																												
PROCEDURES-PATIENTS AT RISK Lead Screening ¹⁴ Tuberculin Test ¹⁵ Cholesterol Screening ¹⁶ STD Screening ¹⁷ Pelvic Exam ¹⁸								•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
ANTICIPATORY GUIDANCE¹⁹ Injury Prevention ²⁰ Violence Prevention ²¹ Sleep Positioning Counseling ²² Nutrition Counseling ²³	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DENTAL REFERRAL²⁴									•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

- A prenatal visit is recommended for parents who are at high risk, for first-time parents, and for those who request a conference. The prenatal visit should include anticipatory guidance, pertinent medical history, and a discussion of benefits of breastfeeding and planned method of feeding per AAP statement "The Prenatal Visit" (1996).
- Every infant should have a newborn evaluation after birth. Breastfeeding should be encouraged and instruction and support offered. Every breastfeeding infant should have an evaluation 48-72 hours after discharge from the hospital to include weight, formal breastfeeding evaluation, encouragement, and instruction as recommended in the AAP statement "Breastfeeding and the Use of Human Milk" (1997).
- For newborns discharged in less than 48 hours after delivery per AAP statement "Hospital Stay for Healthy Term Newborns" (1995).
- Developmental, psychosocial, and chronic disease issues for children and adolescents may require frequent counseling and treatment visits separate from preventive care visits.
- If a child comes under care for the first time at any point on the schedule, or if any items are not accomplished at the suggested age, the schedule should be brought up to date at the earliest possible time.
- If the patient is uncooperative, rescreen within 6 months.
- All newborns should be screened per the AAP Task Force on Newborn and Infant Hearing statement, "Newborn and Infant Hearing Loss: Detection and Intervention" (1999).
- By history and appropriate physical examination; if suspicious, by specific objective developmental testing. Parenting skills should be fostered at every visit.

- At each visit, a complete physical examination is essential, with infant totally unclothed, older child undressed and suitably draped.
- These may be modified, depending upon entry point into schedule and individual need.
- Metabolic screening (eg, thyroid, hemoglobinopathies, PKU, galactosemia) should be done according to state law.
- Schedule(s) per the Committee on Infectious Diseases, published annually in the January edition of Pediatrics. Every visit should be an opportunity to update and complete a child's immunizations.
- See AAP Pediatric Nutrition Handbook (1998) for a discussion of universal and selective screening options. Consider earlier screening for high-risk infants (eg, premature infants and low birth weight infants). See also "Recommendations to Prevent and Control Iron Deficiency in the United States. *MMWR*, 1998;47 (RR-3):1-29.
- All menstruating adolescents should be screened annually.
- Conduct dipstick urinalysis for leukocytes annually for sexually active male and female adolescents.
- For children at risk of lead exposure consult the AAP statement "Screening for Elevated Blood Levels" (1998). Additionally, screening should be done in accordance with state law where applicable.
- TB testing per recommendations of the Committee on Infectious Diseases, published in the current edition of Red Book. Report of the Committee on Infectious Diseases. Testing should be done upon recognition of high-risk factors.

- Cholesterol screening for high-risk patients per AAP statement "Cholesterol in Childhood" (1996). If family history cannot be ascertained and other risk factors are present, screening should be at the discretion of the physician.
- All sexually active patients should be screened for sexually transmitted diseases (STDs).
- All sexually active females should have a pelvic examination. A pelvic examination and routine pap smear should be offered as part of preventive health maintenance between the ages of 18 and 21 years.
- Age-appropriate discussion and counseling should be an integral part of each visit for care per the AAP Guidelines for Health Supervision III (1996).
- From birth to age 12, refer to the AAP injury prevention program ("TIPP") as described in A Guide to Safety Counseling in Office Practice (1994).
- Violence prevention and management for all patients per AAP Statement "The Role of the Pediatrician in Youth Violence Prevention in Clinical Practice and at the Community Level" (1999).
- Parents and caregivers should be advised to place healthy infants on their backs when putting them to sleep. Side positioning is a reasonable alternative but carries a slightly higher risk of SIDS. Consult the AAP statement "Positioning and Sudden Infant Death Syndrome (SIDS): Update" (1996).
- Age-appropriate nutrition counseling should be an integral part of each visit per the AAP Handbook of Nutrition (1998).
- Earlier initial dental examinations may be appropriate for some children. Subsequent examinations as prescribed by dentist.

Key: • = to be performed
S = subjective, by history
←•••→ = the range during which a service may be provided, with the dot indicating the preferred age.
••• = to be performed for patients at risk
O = objective, by a standard testing method

NOTE: Special chemical, immunologic, and endocrine testing is usually carried out upon specific indications. Testing other than newborn (eg, inborn errors of metabolism, sickle disease, etc) is discretionary with the physician. The recommendations in this statement do not indicate an exclusive course of treatment or standard of medical care. Variations, taking into account individual circumstances, may be appropriate. Copyright ©1999 by the American Academy of Pediatrics. No part of this statement may be reproduced in any form or by any means without prior written permission from the American Academy of Pediatrics except for one copy for personal use.





Anticipatory guidances

Provide parent education through age appropriate counseling →



positive outcomes:

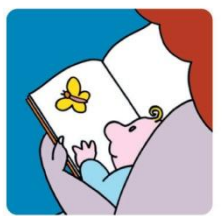
Mother-infant interaction → infant vocal behaviour

Information on infant temperament → better parenting skills

Sleep patterns → improved sleep

Reading aloud → improved language development

Education on injury prevention → decreased home accidents



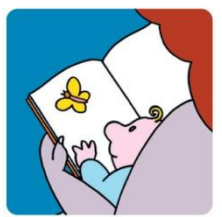
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Npl and emergent literacy

- Oral language development:
lexical and semantic enrichment
- Phonological awareness:
"recognizing phonemes"
- Written language development:
Writing convention, alphabet function

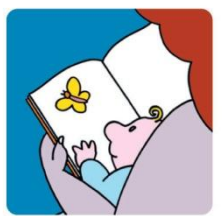


Luciano Biancamano



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Reading aloud is considered the most single important activity necessary for acquiring good reading skills



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Is it a serious problem?

A child unable to read will have difficulties in all other academic areas:





The importance of reading aloud promotion

- Reading aloud and joint book reading regularly at home produces a medium increase in language development, emergent literacy and reading skills of about 8%, this is a statistically significant effect.

Bus A, van Ijzendor M, Pellegrini A. Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research*. 1995; 65: 1-21.

The efficacy of reading aloud

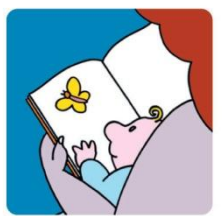
- The medium correlation between child's interest in reading or in literacy activities and his literacy skills ($r: 0.37$) is higher than the correlation between the amount of reading (days/week) and literacy skills ($r:0.28$)

Scarborough H, Dobrich W. On the efficacy of reading to preschoolers. *Developmental Review*. 1994;14: 245-302.

Family literacy

The FACES study(Family and Child Experiences Survey, 1998):

- 1580 children on the Head Start programme (HS).
- The only significant factor in language development is reading aloud at home.



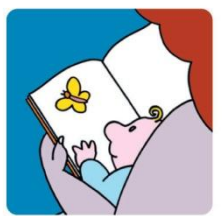
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Literacy and GNP

"The ability to resolve problems of increasing complexity which imply the comprehension of written text..."

- *Study on the association between literacy levels and economic growth in terms of GNP.*
- *14 OCSE nations (rich)*

MarCH 2004 : "Children and Youth Unit, WORLD BANK, Washington DC, USA"

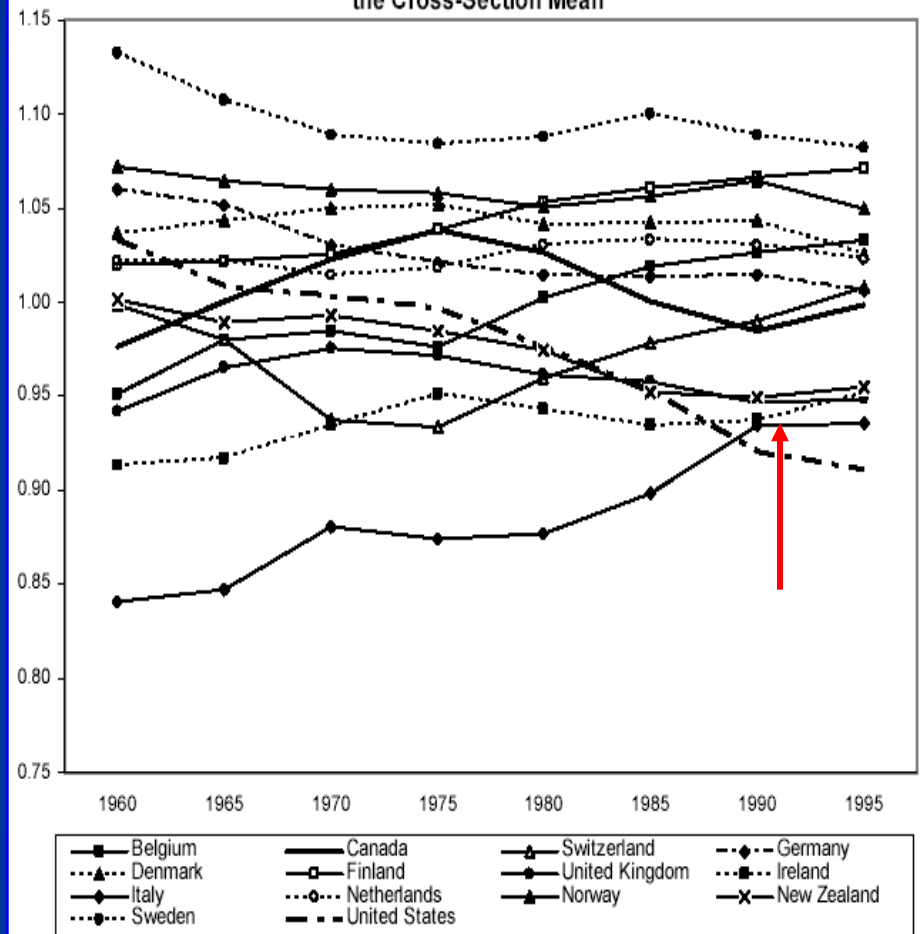


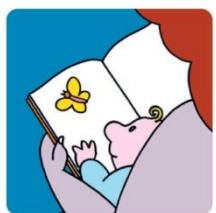
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Human capital and economic growth

- In the last 35 years differences in literacy levels in Europe explain the 55% differentials in economic growth
- A 1% literacy increase can produce a 1.5% increase of GNP in 35 years.
- Italy has a medium literacy level among the lowest in Europe.

Figure 1: Average Literacy Score of Population Aged 17-25 Relative to the Cross-Section Mean

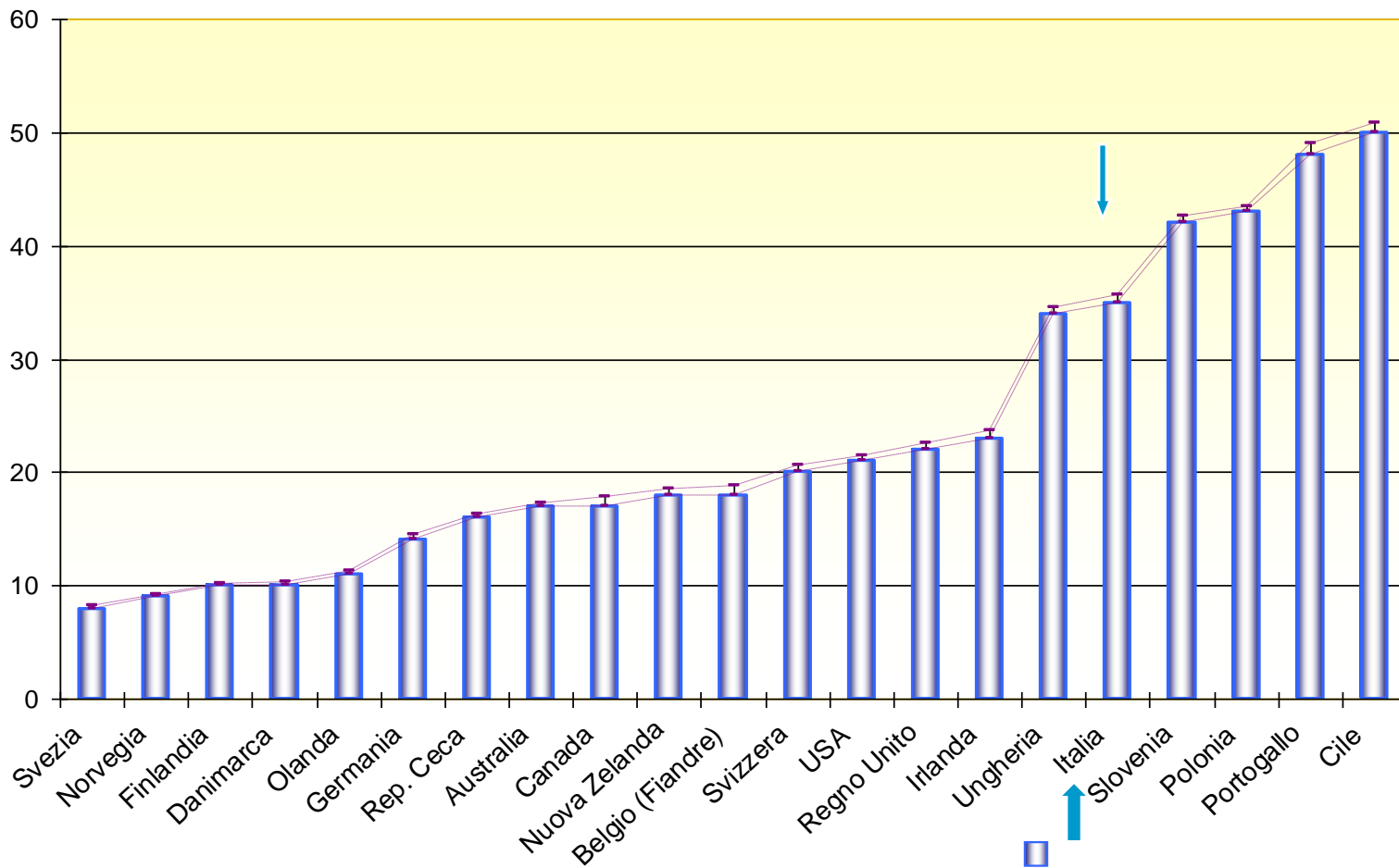




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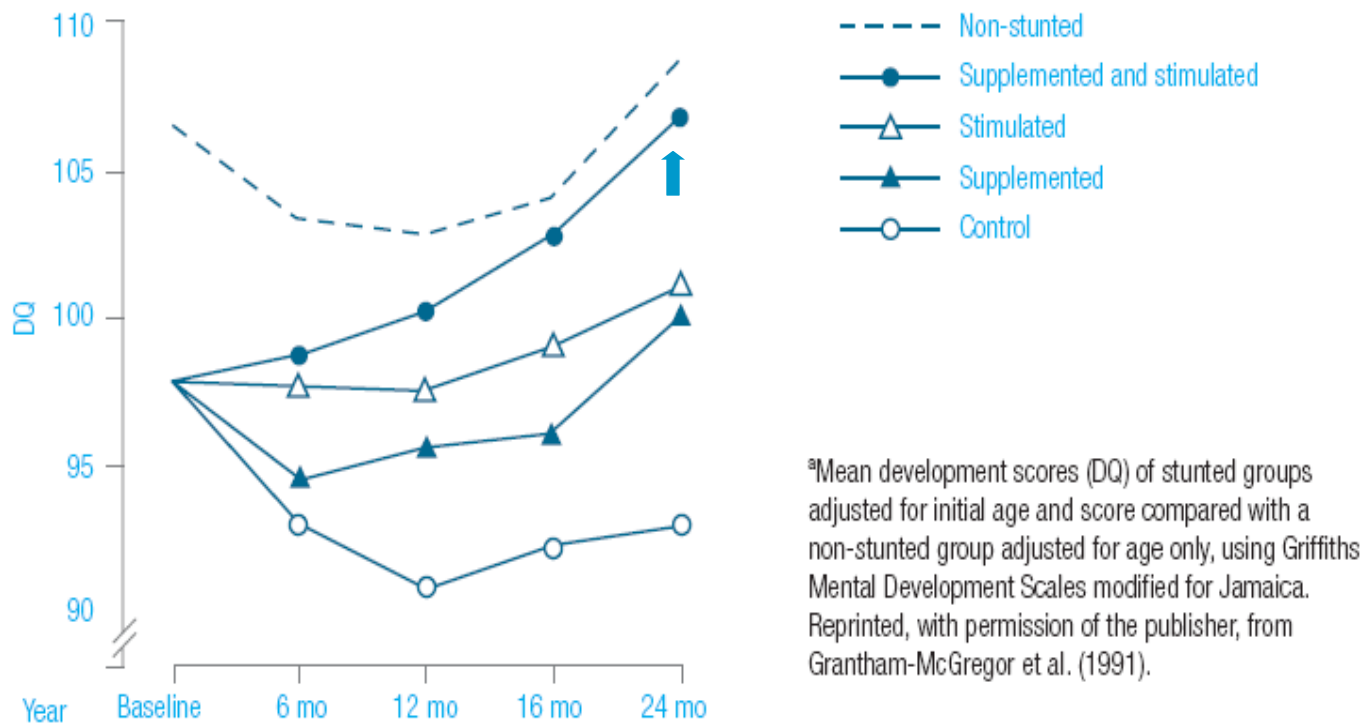
Population at 1° level of alphabetical competences

SIALS: Seconda Indagine Internazionale sulle Competenze Alfabetiche degli Adulti
Ministero della Pubblica Istruzione e Centro Europeo dell'Educazione



Effects of early interventions of psychosocial stimulation : at a short distance in time

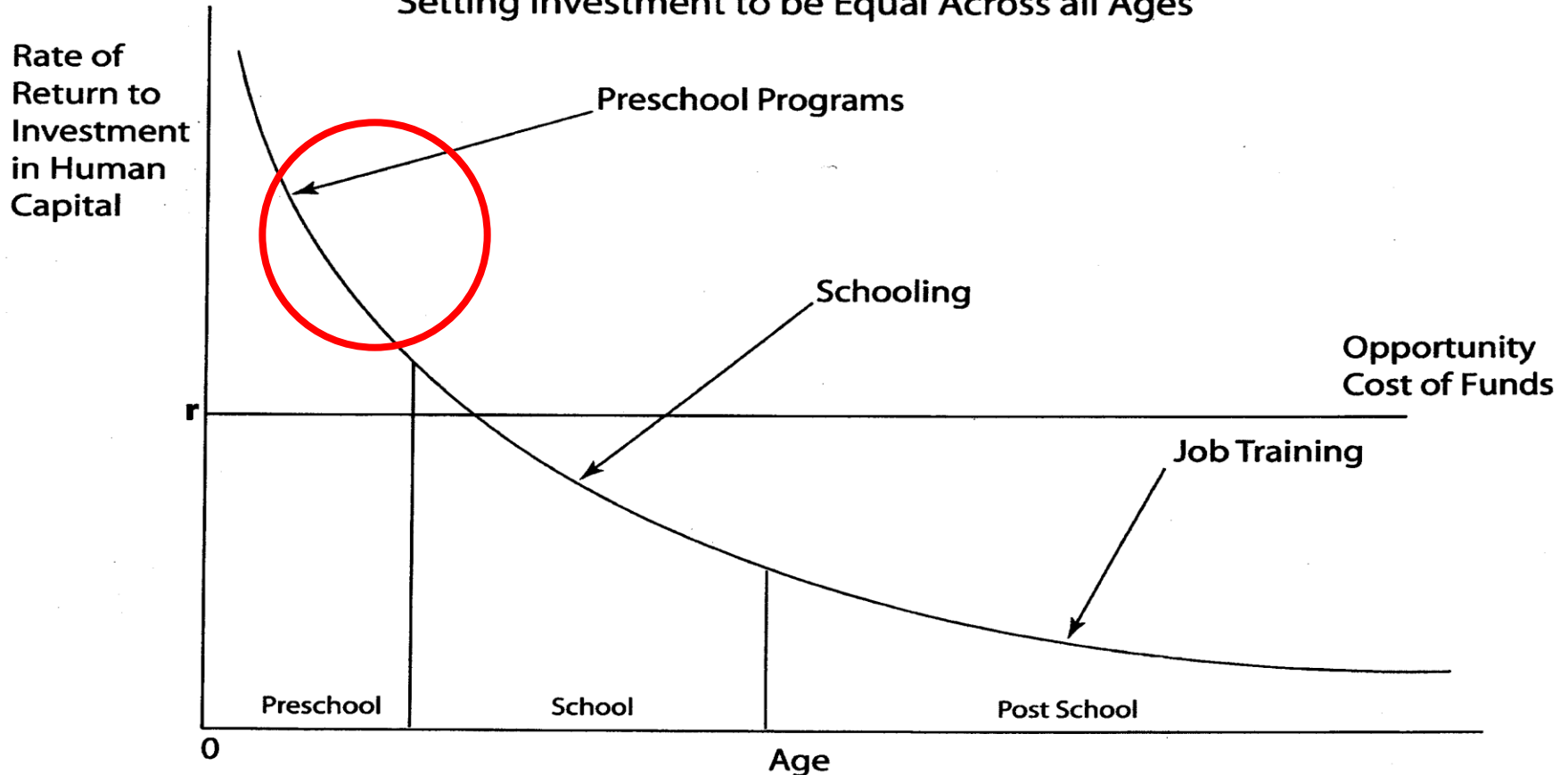
Figure 5.1: Effects of combined nutritional supplementation and psychosocial stimulation on stunted children in a 2-year intervention study in Jamaica.^a



Rates of return to investment in Human Capital : "the earlier the better"

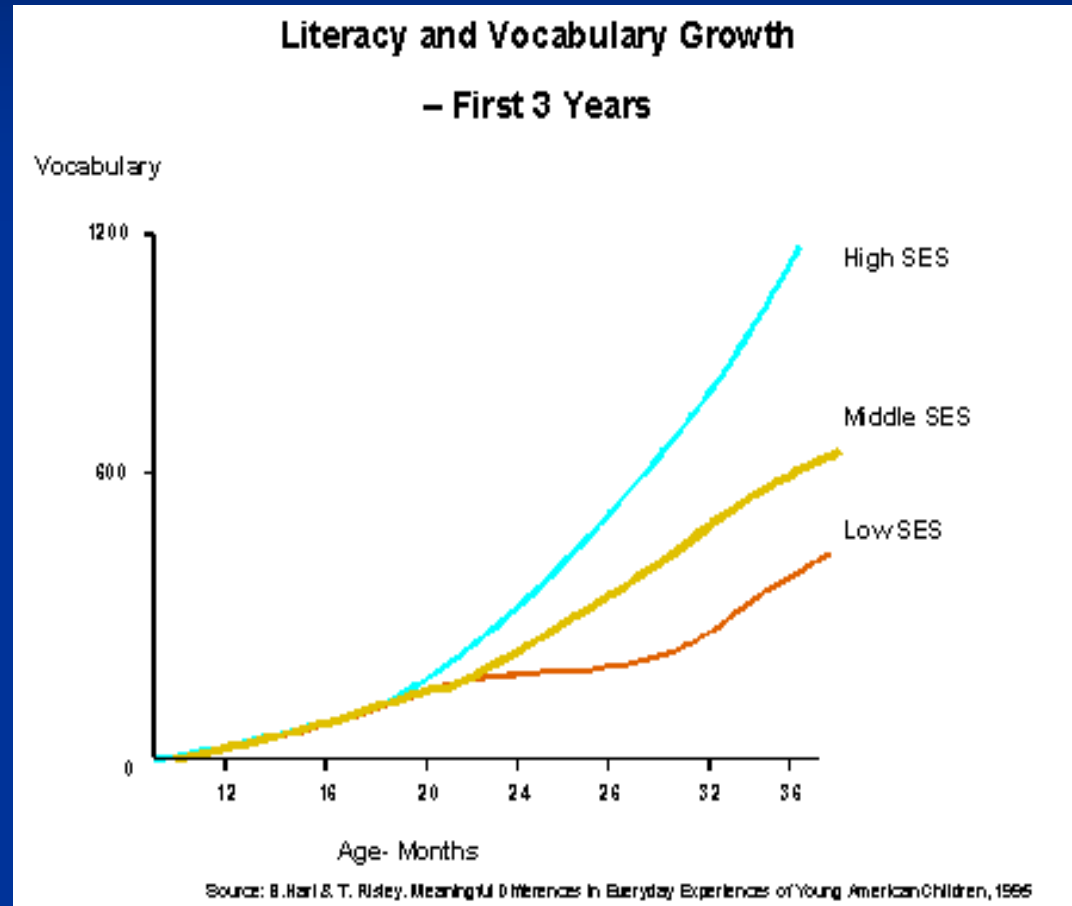
Figure 6-1

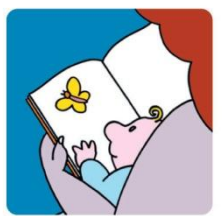
Rates of Return to Human Capital Investment Initially
Setting Investment to be Equal Across all Ages



Rates of Return to Human Capital Investment Initially Setting Investment to be Equal Across all Ages

Literacy and family context





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Emergent literacy and home context

A child in the USA in one hour listens to:

Hart e Risley

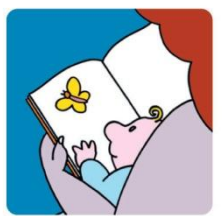
	Words	Assertions	Prohibitions
Welfare family	616	5	11
Working class family	1251	12	7
Medium-high class family	2153	32	5

Effects of early interventions: at a long distance in time

Psychosocial stimulations from 9 to 24 months of age are still evident at 17-18 years of age with statistically significant effects between children with or without this type of stimulation measurable in

- IQ
- Vocabulary
- Reading skills and literacy skills

(Walker S et al. Lancet, 2005)



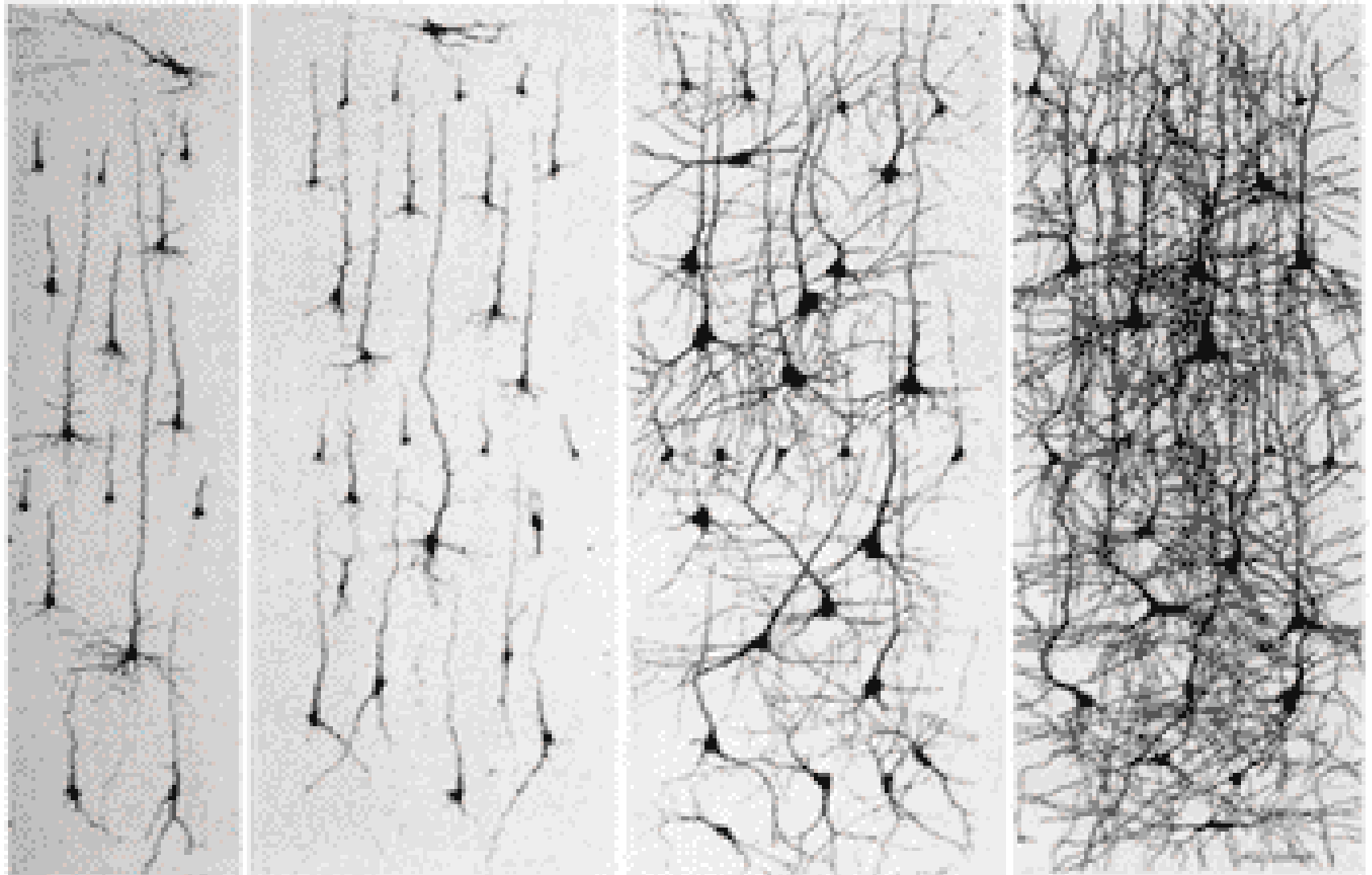
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NpL and brain development

- Very early experiences (0-3 years) are able to create anatomical and physiological changes in neuron connections
- Children are born with millions of neurons, in part connected but a great part of these connections are created after birth reaching a maximum at 3 years of age .
- Half of them are "pruned" at 15 years of age.

Neuron development in the first 3 years

Brain Development Over Time

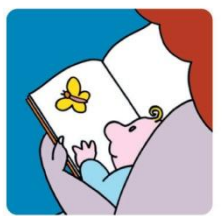


Newborn

1 month

6 months

2 years



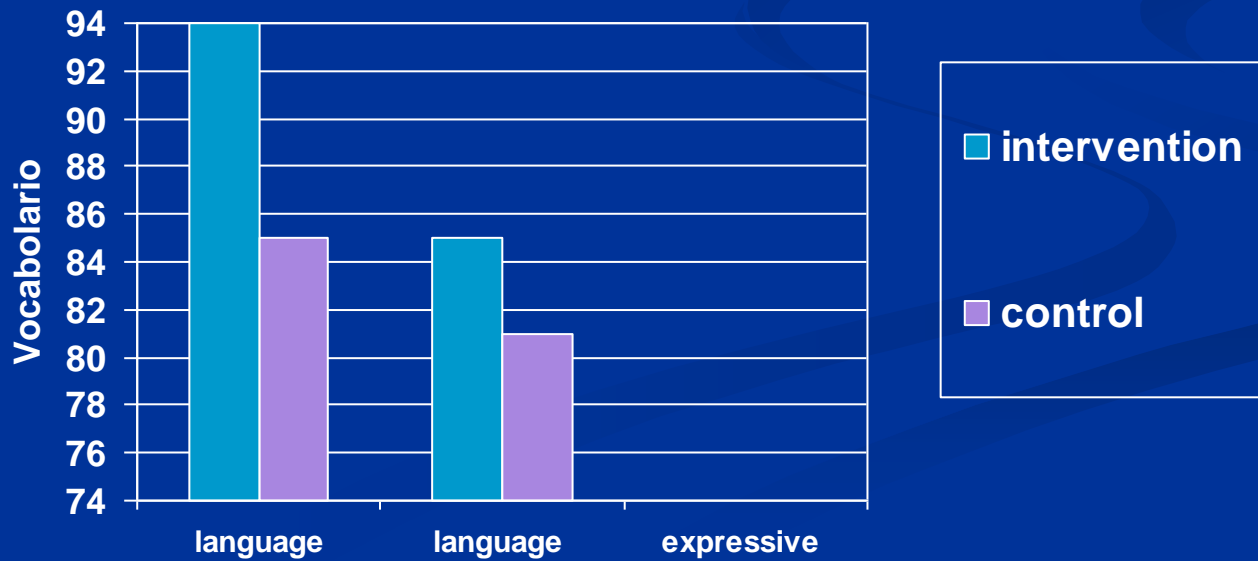
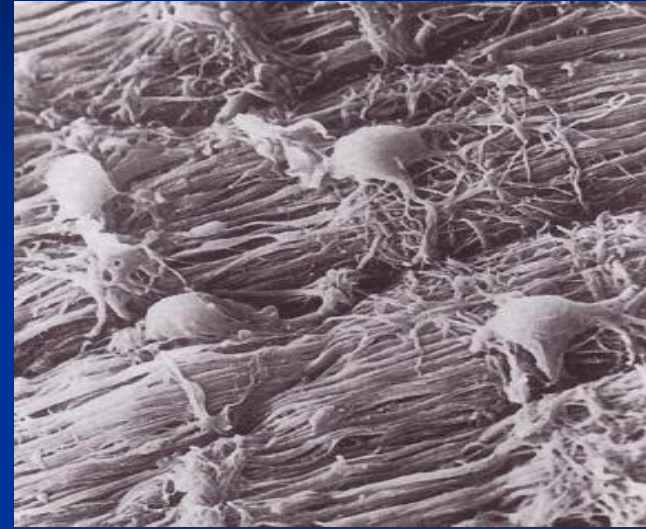
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NpL and brain development

Half of these synapses are lost through a pruning process of the non used connections, while the used connections are fortified

Recent scientific researches have shown that this pruning process is greatly influenced by the child's experiences.

Psychosocial stimulation → neuronal connections
→ competences



Reading aloud promotion and child's future

- Reading aloud, as music and other early interventions remain imprinted with longtime effects



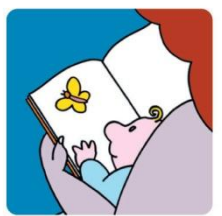
"Face to face" dyad relation



A proto conversation is possible in the first months of life and it is regulated by **emotion exchanges**. At 2 months a child is perfectly able to explore the characteristics of a face (optic nerve myelination)

Dyad "skin to skin" relation

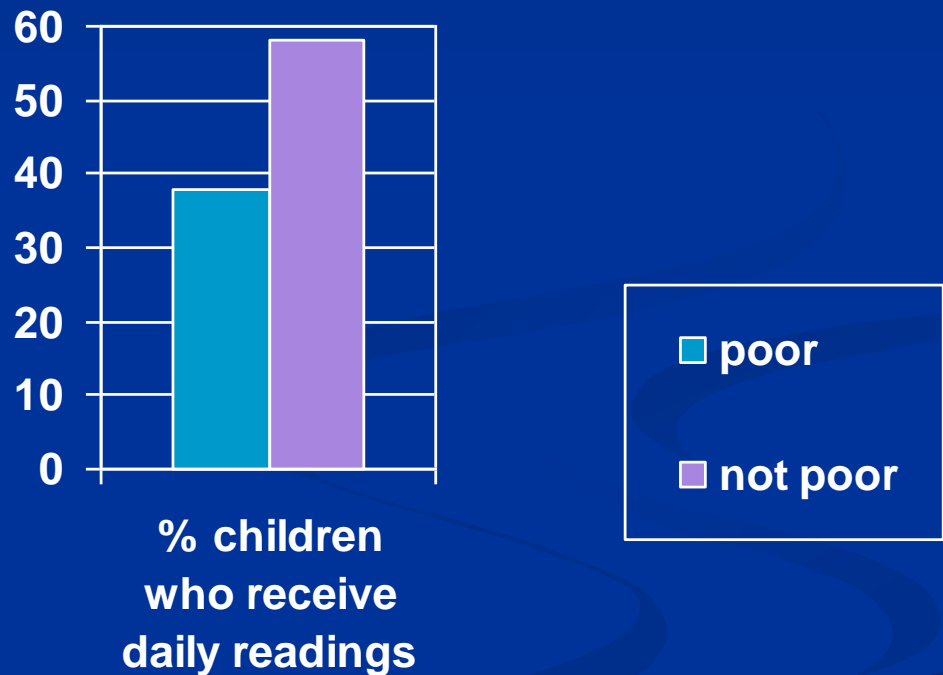




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Literacy and poverty

- Socially disadvantaged families significantly predict child's language exposure. (Bloom, 1998)
- Children from disadvantaged families do not receive daily readings. (National Research Council, 1999)



Frontal cerebral blood flow change associated with infant-directed speech

Y.Saito, S. Aoyama, et al, Arch. Dis. Child. Fetale Neonatal Ed 2007; 92:F113-F116

- Newborns are able to respond to their mother's voice by non nutritive suction and an increased hear beat.
- **"Motherese"** tone variations, longer pauses...facial expressions
- "...listening to a mother talking with her newborn its astonishing not what she says but the way it is spoken. Vocalization seems useful not as an information exchange but useful for the consolidation of mother-child relation. ...**the mother makes longer pauses, reduces vocalizations, this gives the child a longer period for elaboration and for the creation of a mature temporal scheme..necessary for his future dialogical schemes Stern, "First social relations " 1979.**

Frontal cerebral blood flow change associated with infant-directed speech

Y.Saito, S. Aoyama, et al, Arch. Dis. Child. Fetal Neonatal Ed 2007; 92:F113-F116

- **Objective:** examine newborn auditory perception in response to mother's intonations, measured with NIRS (Neuron infrared spectroscopy)
- 20 healthy at term newborns during sleeping listened to their mothers reading a story using motherese or adult speech.
- **Mother speech (motherese) significantly increases cerebral functions in respect to adult speech..**
- **Motherese produces an increase of cerebral blood flow in the oculo-frontal area important in the connections with frontal lobe and subcortical areas of the brain: sensorial, emotivity...**



Mirror neurons



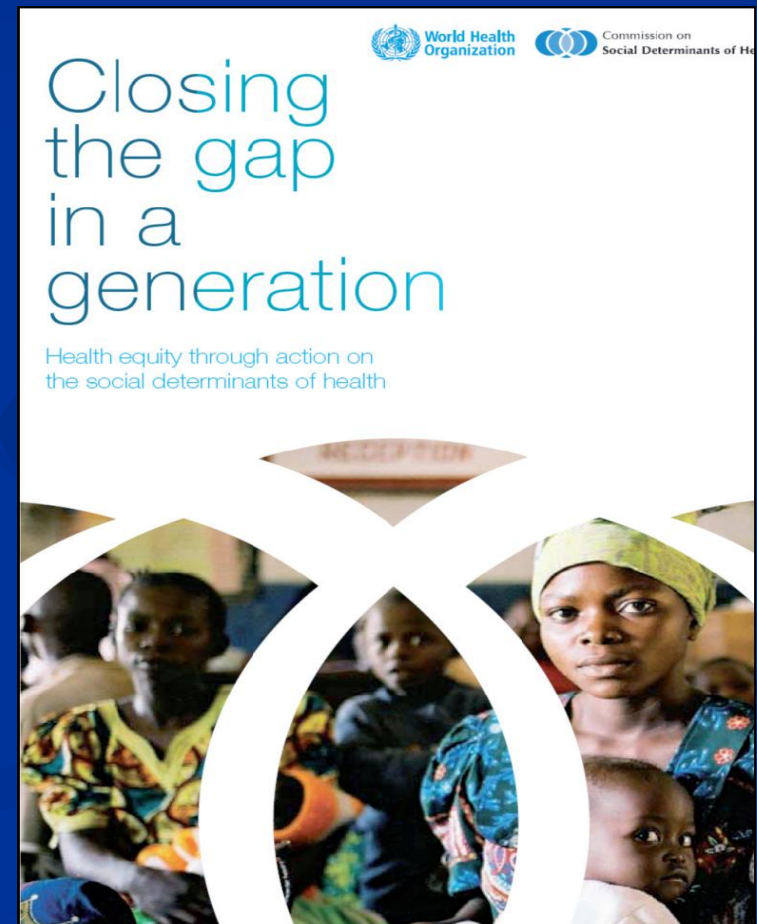
Emotions and brain, at 2 months mutual gaze is associated with dramatic metabolic changes in visual cortex.

Mirror neurons need appropriate caregivers who can reflex and exchange with newborns and infants properly. The quality of the relation of the caregiver is extremely important.

“Early child development (ECD) : a powerful equalizer”

WHO report on social determinants of health (2008)

“ the Commission recommends that nations should ensure for all children quality programmes in health, nutrition, parenting and in reading aloud...”



Who benefits from NpL:

- Children who directly benefit from reading aloud and receive books: **especially disadvantaged children**.
- Parents by receiving essential information regarding the importance of reading aloud and proper suggestions: **especially disadvantaged parents**.
- Paediatricians who use books as good evaluation tools for competent parenting, create new and good relations with parents, learn a **good evidenced based practice** useful in improving their daily work.

Is it useful?

“ when we visit a child the things we say to parents can change parents attitude and ideas?

Can they change parents behaviour at home?

Can they change a child's opportunity and development in better ?





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Yes, we can...



Thank you

