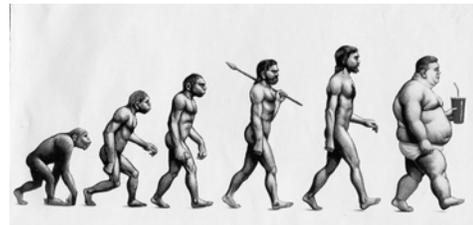


Early intervention

David Hall
Melbourne, September 22nd 2008



Early intervention for obesity?

(1) Severe / potentially disabling conditions – generally uncommon

- Congenital hearing impairment
- Visual impairment – partial sight or blindness
- Severe learning disability
- Cerebral palsy
- Classic autism



(2) Developmental problems ...

- Delayed or atypical speech / language acquisition
- Autism spectrum disorders
- Developmental dyspraxia ("clumsiness")
- Dyslexia
- Mild learning difficulties

Emotional and behavioural problems

- Generally self – limiting though troublesome at the time –
 - Sleep disturbances
 - Eating problems – fads, picky eaters etc.



Temper tantrums



Toileting –
continence problems

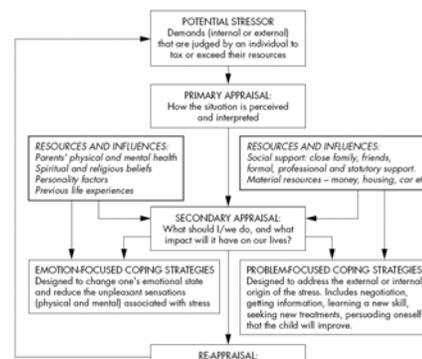


Attention deficit disorder, impulsivity and aggressive behaviours

“Me and my brother used to play together a lot”

Why it matters

- Parents want to know
- Parents’ feeling that “the system” has let them down
- Parental grief relates to age of diagnosis
- Parents’ stress and coping



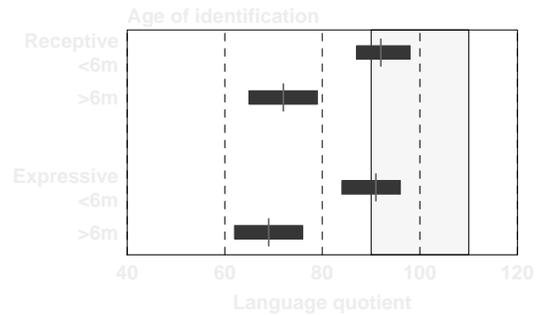
Stress and Coping Model, based on Lazarus and Folkman¹¹ and Beersford¹² (with permission of *J Child Psychol Psychiatry*).

Davies S and Hall D. *Arch. Dis. Child.* 2005;90:1053-1057

Why it matters (2)

- Improve the quality of life for the child and the family.
- Plan educational needs; life decisions - more children, careers, housing and so on.
- Avoid secondary frustrations and disappointments

Receptive and Expressive standardised language scores as a function of age of identification for children with 'normal cognition' (Yoshinago-Itano, 1999)



For details of early intervention in visual impairment and risk of "developmental setback", see Dale, N.; Salt, A; *Child: Care, Health & Development*. 33(6):684-690, November 2007.

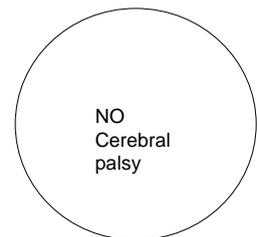
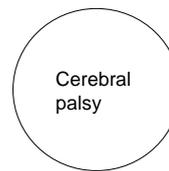
Developmental Catch-up, and Deficit, Following Adoption after Severe Global Early Privation

J. Child Psychol. Psychiat. 39(4), pp. 465-476.

"The catch-up in both physical growth and cognitive level appeared nearly complete at 4 years for those children who came to the U.K. before the age of 6 months. The developmental catch-up was also impressive, but not complete, in those placed after 6 months of age".

Intervention for what?

How do you define the problem we are trying to solve?



Autism spectrum

A child's problems with **friendships** are on the continuum from:

- friendships break down
 - wants friends but can't make them
 - Doesn't see need for special friends
 - No interest in others

Language problems range from:

- subtle language difficulties
- disordered, difficult to understand language
 - single words or babble
 - no language

The severity of **repetitive behaviours** ranges from trivial to overwhelming:

- has routines; increased flapping
 - upset when routines disturbed; rigid
 - severely restricted interests
 - continuous self-harm



Speech & language problems

Bishop's reviews

- "There has been a tendency for researchers to look for a single cause of SLI ... this may not be a fruitful approach ... "
- "...a genetic risk factor ... may not lead to impairment unless other risk factors are also present ..."

Bishop D. *Dev Med Child Neurol* 2000, 42: 133-142
 Bishop D. *Phil Trans R Soc Lond. B.* 2001. 356 369-380

Time to give up on a single explanation for autism

Francesca Happé, Angelica Ronald & Robert Plomin
NATURE NEUROSCIENCE 2006; 9 (10):1218-20

"The distribution of such traits supports a smooth continuum ... between individuals meeting diagnostic criteria for ASD and individuals in the general population."

"... it is time to give up on the search for a monolithic cause or explanation for the three core aspects of autism..."

"Abandoning the search for a single cause for a single entity of autism may also mean abandoning the search for a single 'cure' or intervention."

Multiple interventions for developmental problems - but high quality evidence still lacking as to what works best for which children and at what age

(5) Put the big dog in front of the acropomus
 A child's action in (1) and (2) cannot always be distinguished indubitably from merely relating two objects together, because the options are too limited.

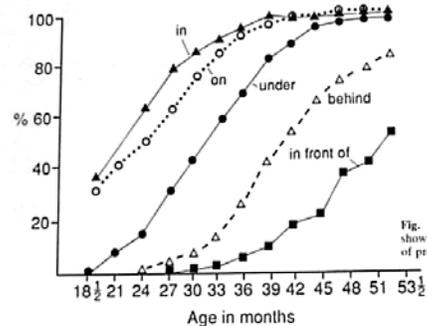
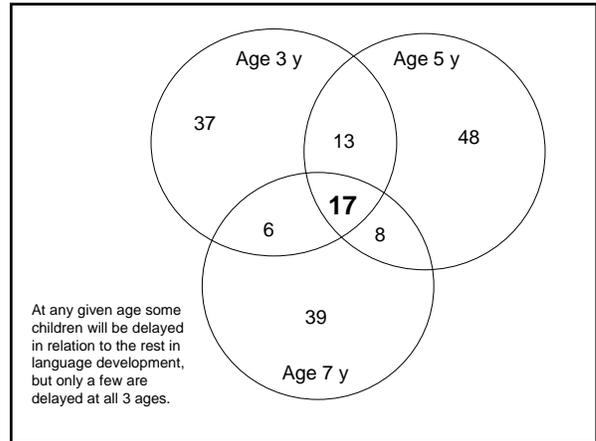
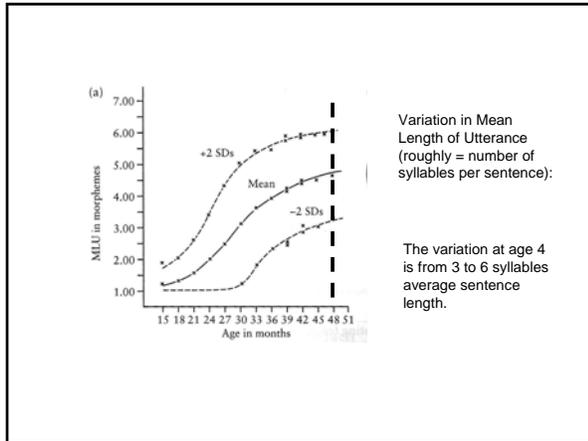


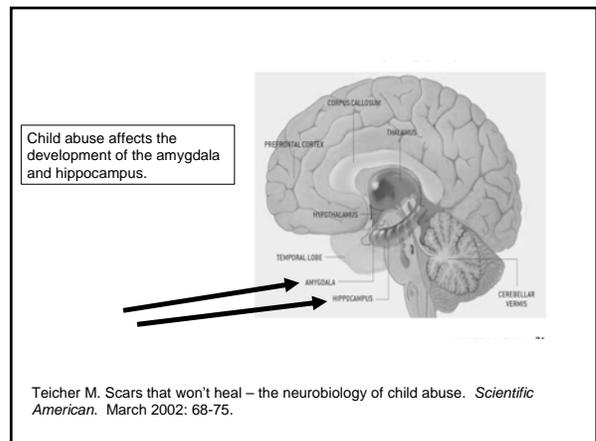
Fig. 10.2. Percentage showing comprehension of prepositions by age.

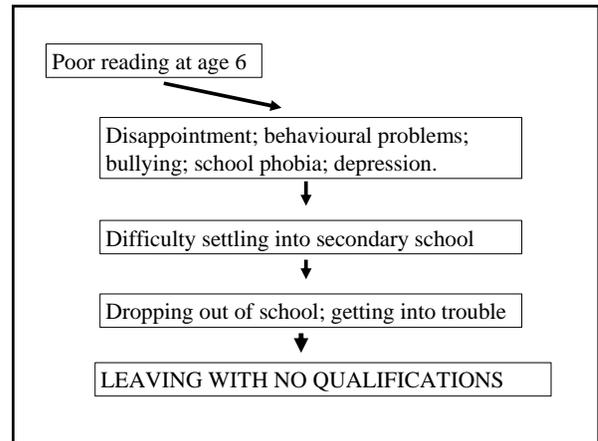
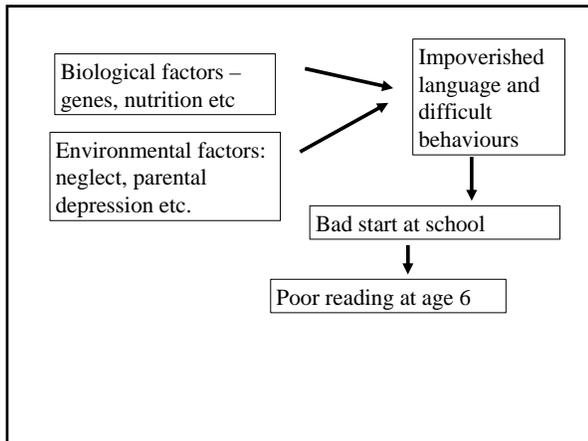


- ### Multi – disciplinary approach to child development
- Neuroscience – the study of how the human infant brain develops and learns;
 - genetics;
 - life course studies;
 - developmental psychology.

- ### Brain development
- at its fastest early in life,
 - forming vast numbers of new cells and connections,
 - pruning unwanted ones,
 - connections may fail to form as they should

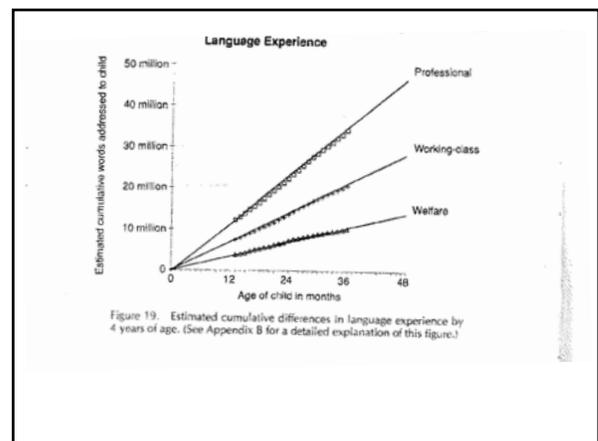
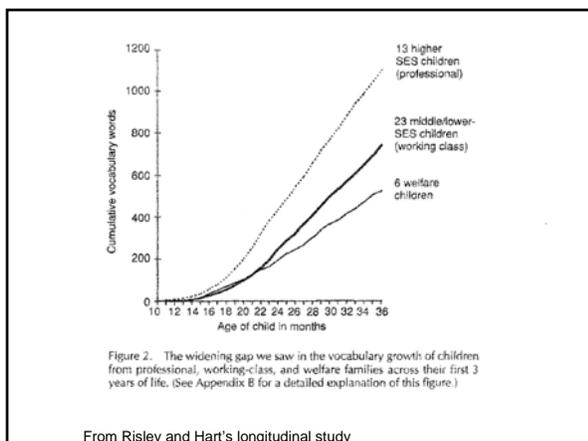
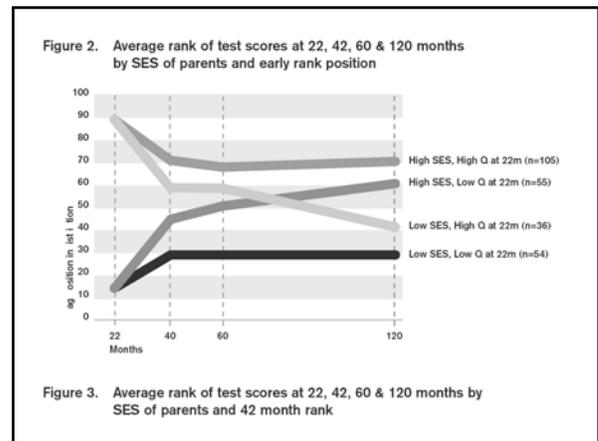
- ### Biological factors
- Genes
 - Intra-uterine growth: relates to
 - Nutrition
 - Smoking
 - Toxins (alcohol, drugs etc) & infections
 - Nutrition in first years of life





Poverty

- Financial
- Emotional
- Mental health resources
- Experiences





Study predicts long-term benefits of preschool Learning - The Effective Provision of Pre-School Education Project (EPPSE)

..... the benefits of reading teaching them nursery rhymes and taking them to the library ...

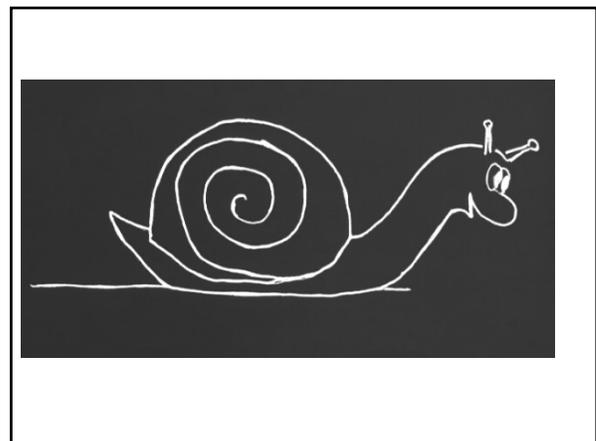
.... a combination of a good home learning environment, good preschool education and a good primary school

without these benefits an average child from a poor background would be in the bottom 20% at school,

with all three advantages it would on average move into the top 20%.

Nurse Family Partnership:
an intensive home visiting programme for first – time young poor mothers in the USA.
Olds D. et al.

Early detection:
parents are key but ... is there a place for screening ??



Why screening is difficult

- Need to sample wide range of developmental skills in a short time ..
- In a child you don't know
- Development doesn't progress in a linear fashion
- We don't know enough about intervention- exactly what do we screen for ?

Who discovers the first bath together could bring tears to her eyes. But not to his.

Getting Pregnant | Pregnancy | 0-12 Months | 12-36 Months

babycentre

Milestone chart: 25 to 30 months

What to expect from your toddler at this stage.

Child's Age	Mastered Skills (most children can do)	Emerging Skills (half of children can do)	Advanced Skills (only a few children can do)
25 and 26 months	<ul style="list-style-type: none"> Takes off clothes Turns several body parts Builds a tower out of three or four building bricks 	<ul style="list-style-type: none"> Washes and dries hands Brushes teeth with help Puts on clothes Throws a ball overarm 	<ul style="list-style-type: none"> Speaks clearly all the time Draws vertical line
27 and 28 months	<ul style="list-style-type: none"> Speaks clearly most of the time Puts on clothes Jumps up off the ground 	<ul style="list-style-type: none"> Speaks clearly most of the time Builds a tower out of several bricks Speaks clearly all the time 	<ul style="list-style-type: none"> Draws vertical line Balances on one foot

babycentre – a free internet information and advice resource for parents that supports **monitoring**

The early intervention dilemma

- Neuroscience says the earlier the better
- Parents want early diagnosis
- Developmental psychology and clinical experience says early identification is difficult.
- Educational research says many young children who are currently within the normal range are likely to have problems in the future by reason of an impoverished environment.



Welcome to Early Support

Early Support is the Government programme to achieve better co-ordinated, family focused services for young disabled children and their families. It's a national programme that is being introduced and used in local authorities, hospitals and community-based health services across England.



For families

A section for parents and carers about what Early Support means for families.

What is Early Support?

About the aims of Early Support, which children it supports and how it works.



Department of Health

The Child Health Promotion Programme

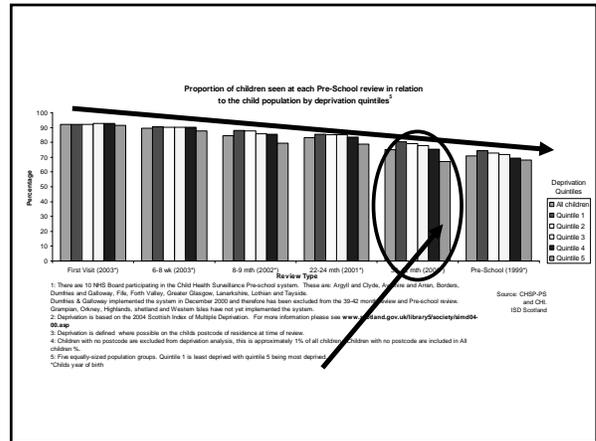
Pregnancy and the first five years of life

High quality day care is vital – but expensive

Your child will be encouraged and supported every step of the way and a record will be kept of their personal development to ensure that their every need is met.

Children's Centres will ...

- Provide high quality day care, play, and parent support
- Identify children whose development or behaviour are worrying
- Contribute to detailed assessment
- Ensure that children with disabilities receive a timely intervention programme.



Hard to reach families

- Often young, poor, isolated, depressed, no educational qualifications
- May be domestic violence or abuse, drug or alcohol misuse
- Past or current child protection concerns
- Language or cultural barriers
- General suspicion of and hostility to professionals and authority figures

