Module 2 - Background

Content Overview

2.1 Definitions

Vulnerability

“the additional needs or barriers children face which may make them less likely to live healthy, happy, safe lives, or less likely to have successful transitions to adulthood.’

Children’s Commissioner in England (2017)

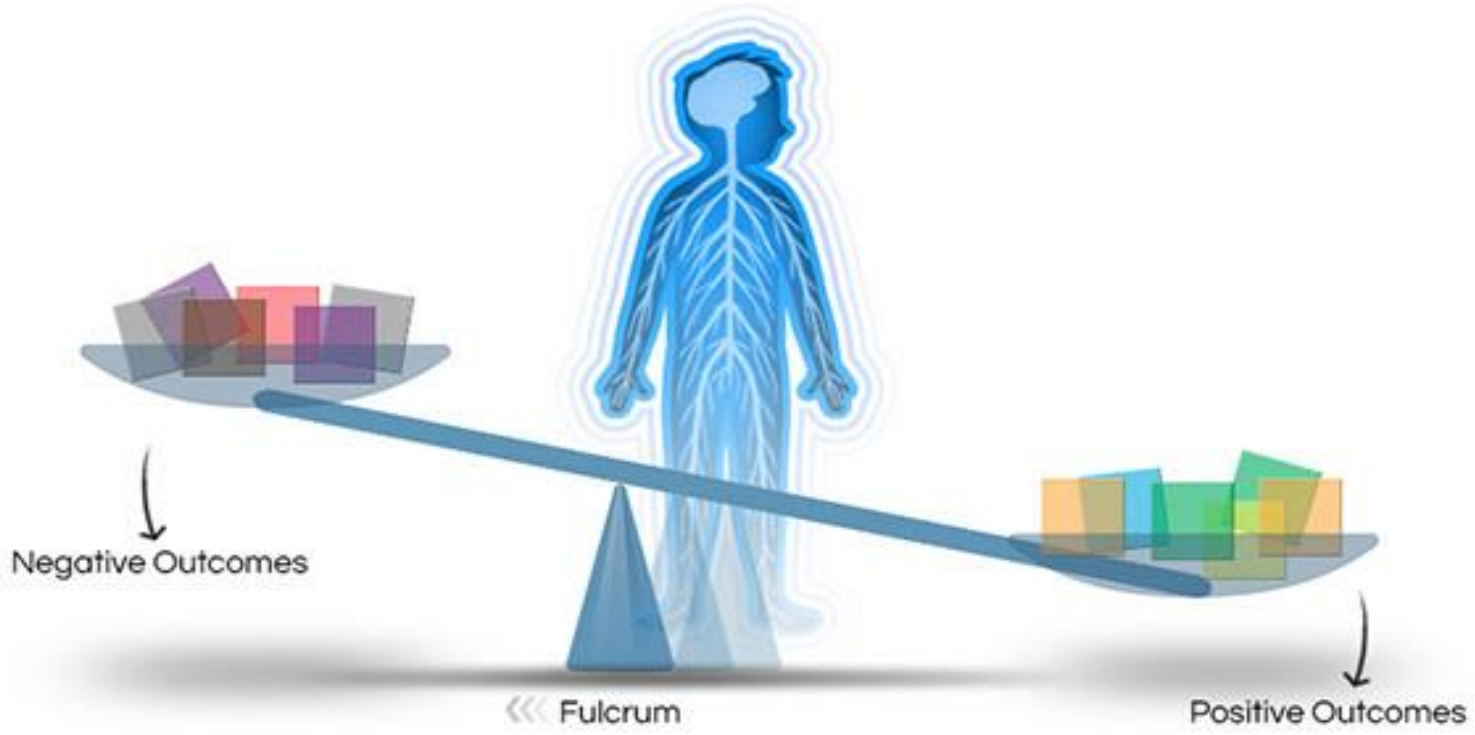
Does **not** mean **vulnerable**

Resilience

the ability to ‘bounce back’, adjust or recover from adversity, life’s setbacks, and disadvantage.

Does **not** mean **resilient**

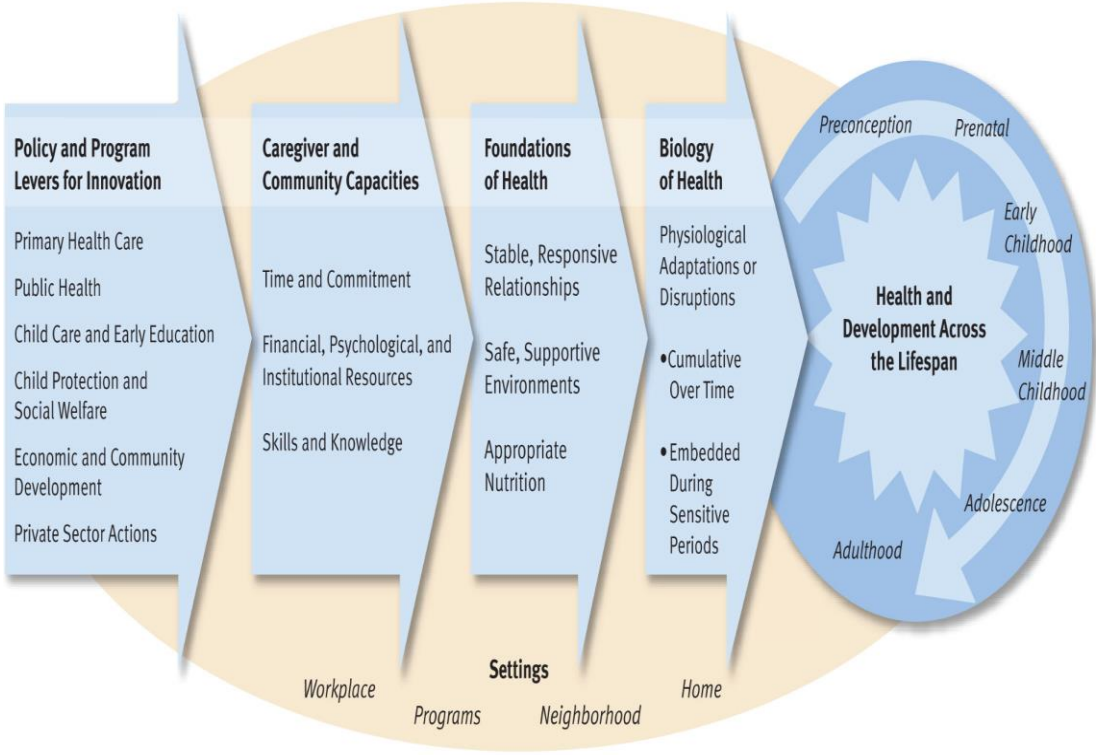
2.1.1 A Balancing Act – developing resilience



Find out more https://developingchild.harvard.edu/science/key-concepts/resilience/

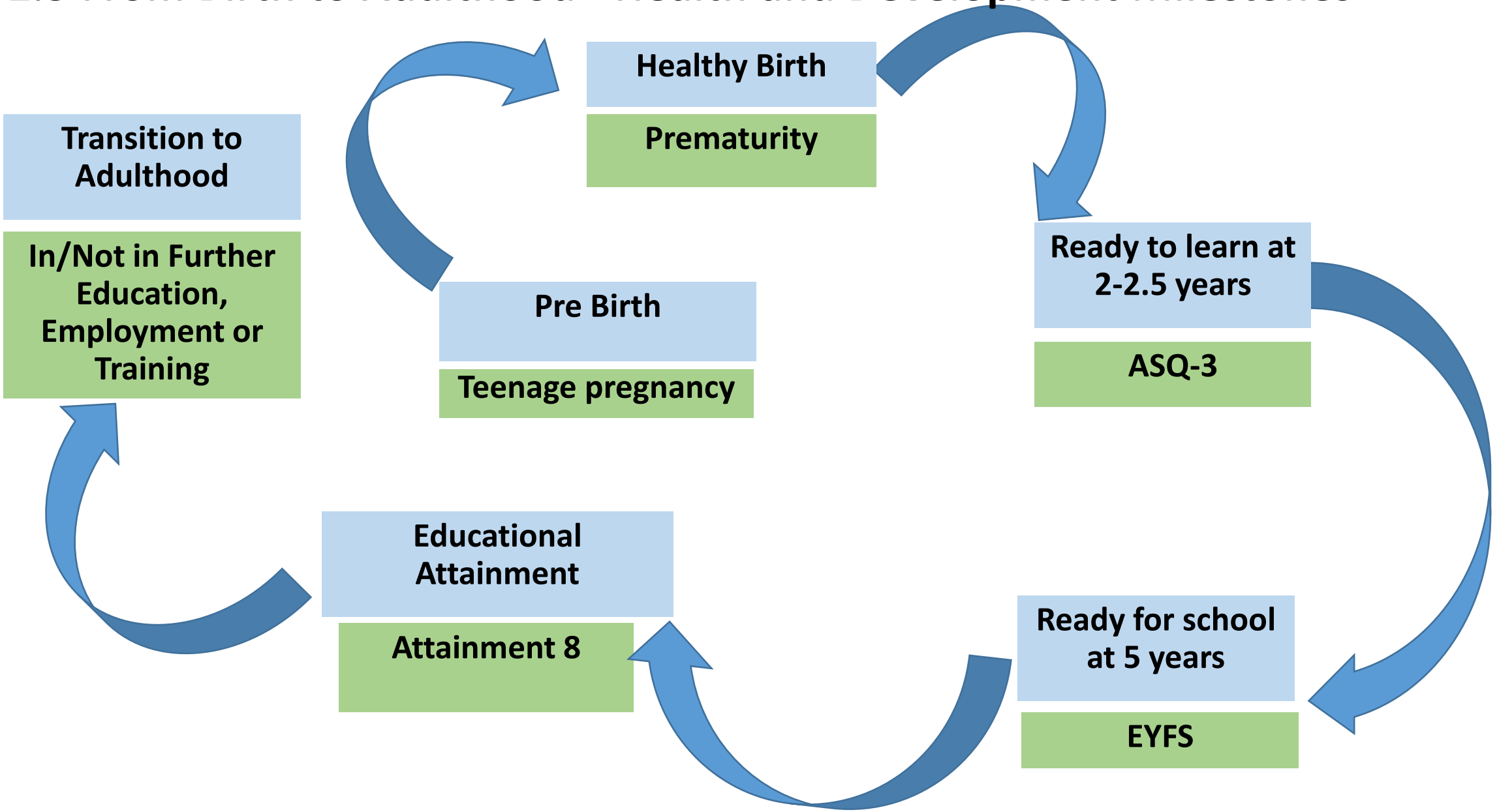
2.2 An ecological view and approach

- Highlights the interactions between the many factors and systems that impact on foetal and child development.
- Provides an explanatory framework for health inequalities across the full lifecourse
- Recognises interdependencies within the entire system and no single part of the system can on its own bring change for children.
- Change depends on services that attend to children's psycho-educational development and social and economic circumstances at multiple levels in a coherent and integrated way.
- Applying an ecological perspective to *What Works means considering how each of these system* impacts on the families
- A **healthy birth** and **early childhood development** are useful in **gauging children's trajectories** later on in life.



Source: Center on the Developing Child at Harvard University (2010). The Foundations of Lifelong Health Are Built in Early Childhood. http://www.developingchild.harvard.edu

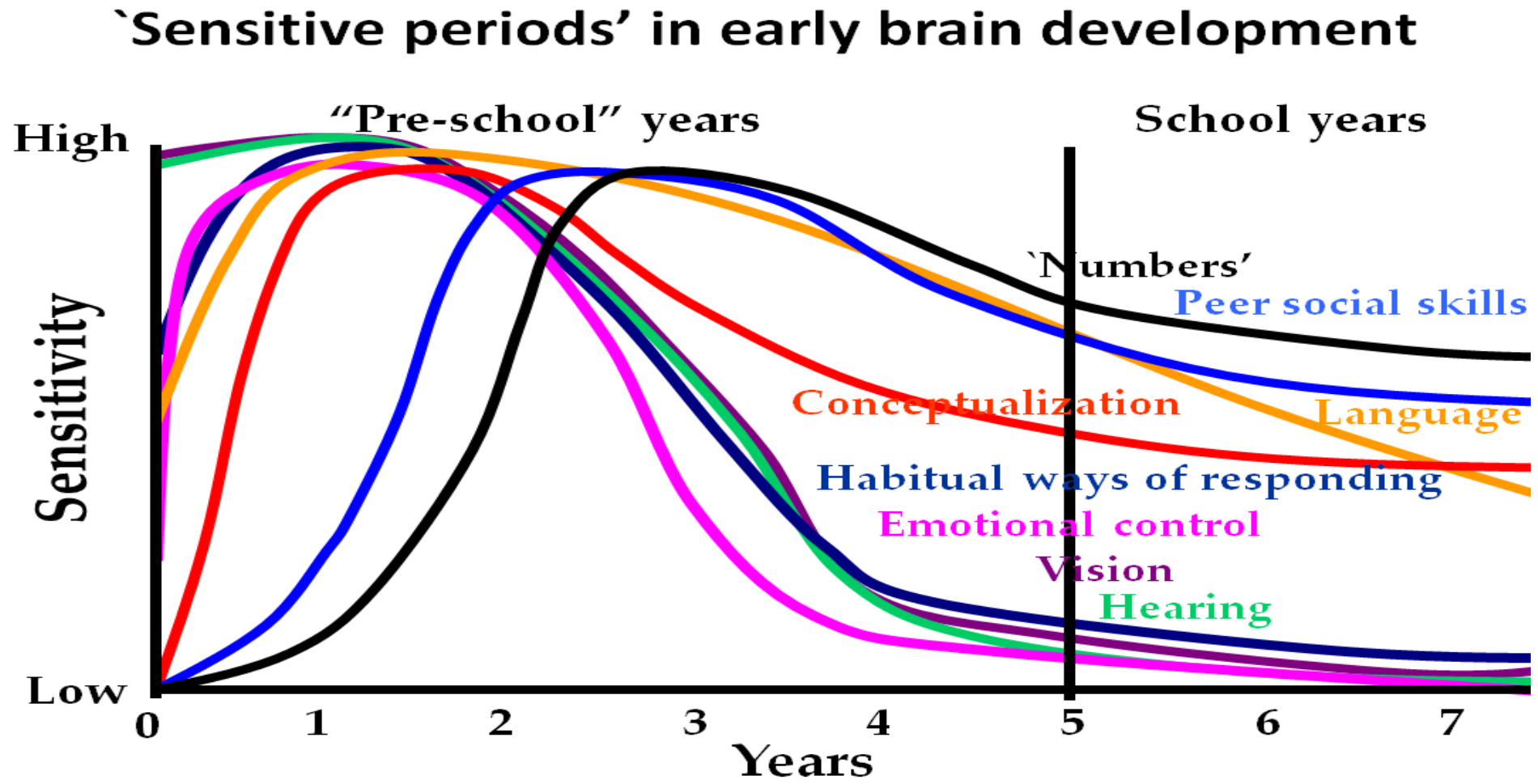
2.3 From Birth to Adulthood - Health and Development Milestones



2.4 The critical 1001 days: what the evidence tells us

- Optimum brain development and nurturing is vitally important as foundations of babies mind are being put in place
- Earliest experiences shape a baby's brain development, having a lifelong impact on baby's mental and emotional health. Key factors influencing those early experiences:
  - sensitive attuned parenting
  - effects of socio-economic status
  - the impact of high-quality early education and care
- As well as being a time of unique opportunity it is also a unique time of vulnerability
- Exposure to overwhelming stress (mum or environment) - world's a dangerous place, response set to high alert and can lead to social and emotional problems
- If a baby doesn't get the best start and falls below expected development, this continues in future years and it is difficult to catch up
- Attachment is key for baby's social and emotional development.
- 7:1 greater risk of abuse and neglect during this period compared with older children. 36% of Serious Case Reviews in England involve a baby under one.
- The best chance to turn this around is during this period.
- At least one loving, sensitive and responsive relationship with an adult caregiver is a protective and positive factor

Critical 1001 days – a time of unique opportunity



Graph developed by **Council for Early Child Development** (ref: Nash, 1997; *Early Years Study*, 1999; Shonkoff, 2000.)

2.5 Brain Architecture

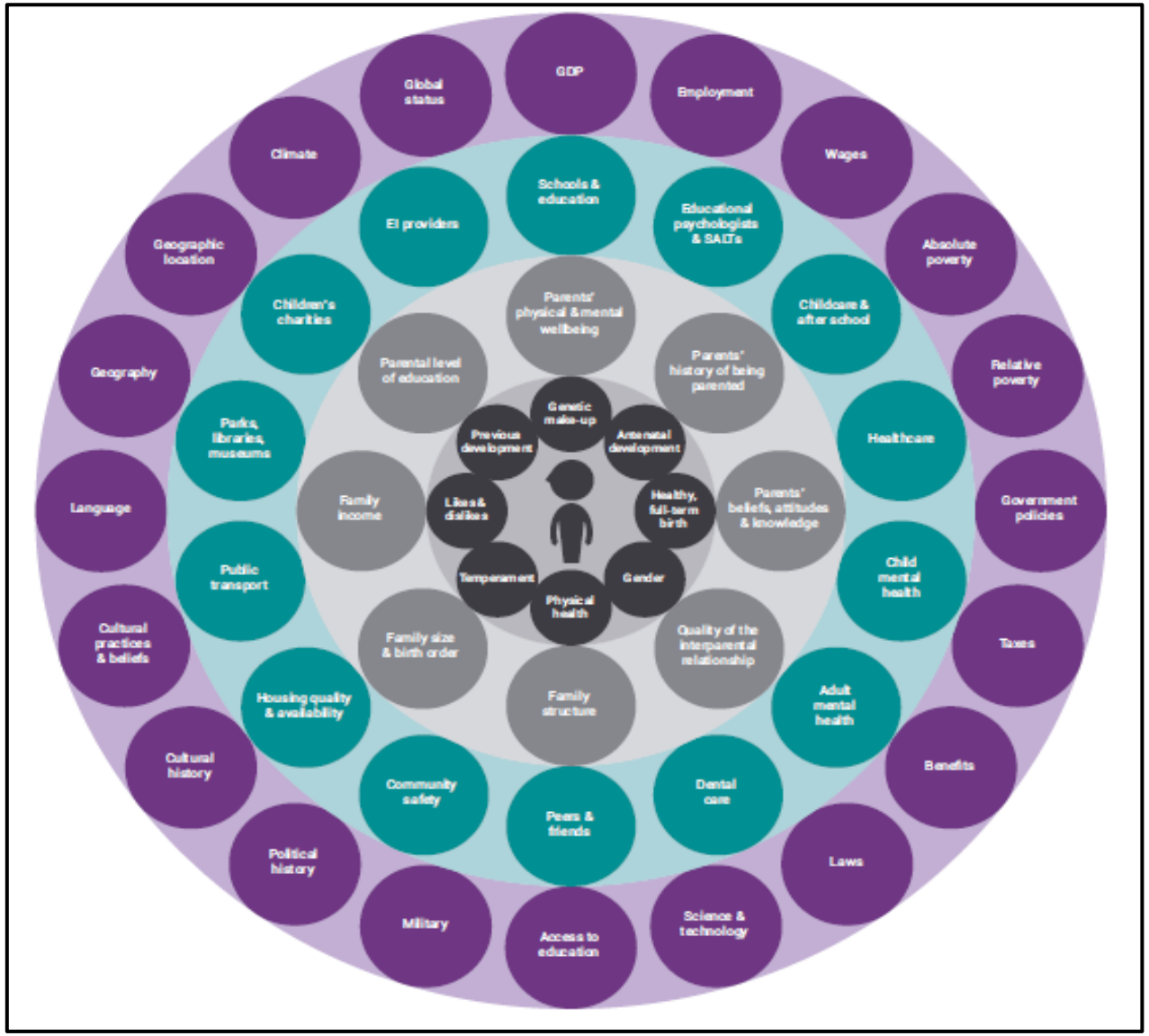
- Brains are built over time, from the bottom up and their basic architecture is constructed through an ongoing process that begins before birth and continues into adulthood.
- Early experiences are built into our bodies creating biological “memories” that shape development.
- Adverse experiences early in life can impair brain architecture, and disrupt healthy development, with negative effects lasting into adulthood.
- Toxic stress - extreme and long-lasting – in the absence of protective relationships can affect brain architecture, cardiovascular system, immune system & metabolic regulatory controls.
- Learning how to cope with adversity is an important part of healthy child development.
- It is easier and less costly to form strong brain circuits during the early years than to intervene or “fix” them later.
- An “environment of relationships” is crucial for the development of a child’s brain architecture and shapes child development.
- The serve and return interaction is a major ingredient in development process.
- In the absence of responsive caregiving or if responses are unreliable or inappropriate, the brain’s architecture does not form as expected, which can lead to disparities in learning and behaviour.

Find out More  https://developingchild.harvard.edu/science/key-concepts/brain-architecture/

2.6 Adolescence

- The adolescent years (ages 10-19) herald a new suite of significant developmental changes:
- Physical development – puberty happens over a 3-4 year period but at different times. In the UK, the peak age is around 12-13 years for girls, and 13-14 years for boys. This requires adjustment to a new physical sense of self including body image.
- Cognitive development –the brain goes through significant re-organisation and 'fine tuning' including in the areas of understanding and interacting with others. Young people become better at considering risk, learning from previous experience, moral thinking, and at controlling impulses.
- Emotional development – a stronger sense of personal sense of identity and self-esteem emerges. Skills associated with resilience, such as, autonomy and coping strategies also further develop.
- Social development - peer groups and influence take primacy. Young people seeks relationships outside the family and develop a sexual identity.
- Behavioural development – adolescents are more likely to seek out new experiences and engage in risk taking behaviours than other age groups. Whilst these are life experiences that can generate important learning, they can also have various adverse consequences for health. Many unhealthy behaviours are initiated in adolescence.

2.7 RISK FACTORS OCCURING IN A CHILD'S LIFE



Source: Early Intervention Foundation: Realising the potential of early intervention (2018)

2.8 When Vulnerability Becomes Adversity – Stress Respon

Positive stress response - normal and key part of healthy development e.g. first day at nursery, immunisations.

Tolerable stress response - activates the body's alert systems to a greater degree due to something more severe or longer lasting e.g. loss, natural disaster.

Toxic stress response - can be due to strong, frequent, and/or prolonged adversity e.g. Adverse Childhood Experiences (ACE). Can adversely impact on brain architecture and other organ systems, and increase the risk for stress-related disease and cognitive impairment, well into the adult years. When toxic stress response occurs continually, or is triggered by multiple sources, it can have a cumulative toll on an individual's physical and mental health—for a lifetime. The more adverse experiences in childhood, the greater the likelihood of developmental delays and later health problems, including heart disease, diabetes, substance abuse, and depression.

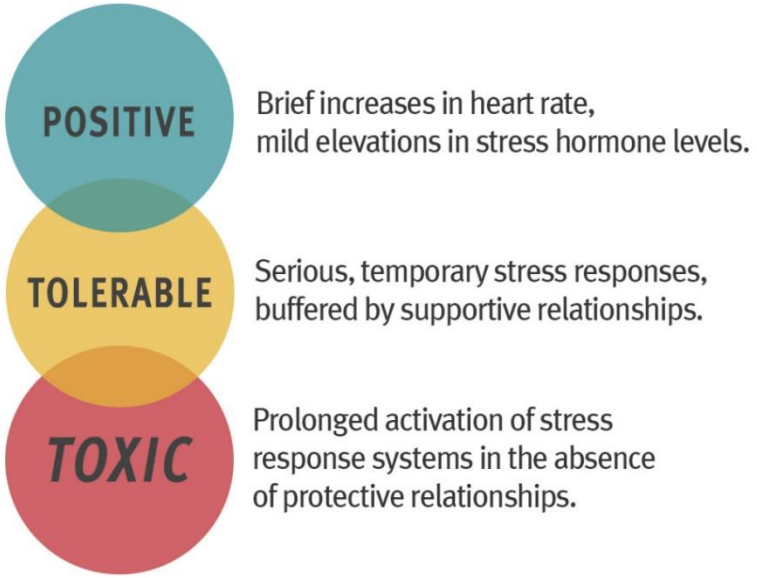
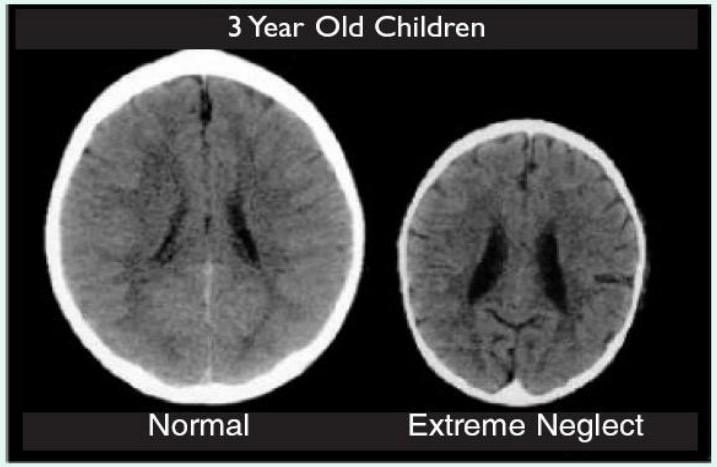


Figure 4.2: Differences in brain development following sensory neglect

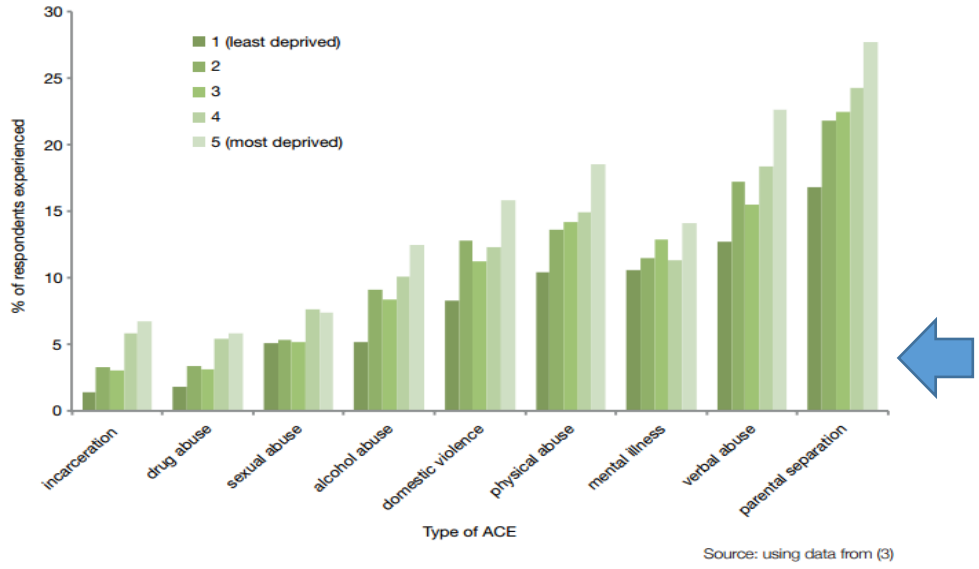


This figure compares the brain of a normal 3-year-old child (the image on the left) with the brain of a 3-year-old who has suffered severe environmental sensory-deprivation neglect (the image on the right). The child who has suffered neglect has a significantly smaller brain and has enlarged ventricles and cortical atrophy.[47]

2.9 Adverse Childhood Experiences (ACES)

- Prolonged toxic stress can have a cumulative toll on child development and health and wellbeing right through the lifecourse.
- Research also indicates that supportive, responsive relationships with caring adults as early in life as possible can prevent or reverse the damaging effects of toxic stress response.

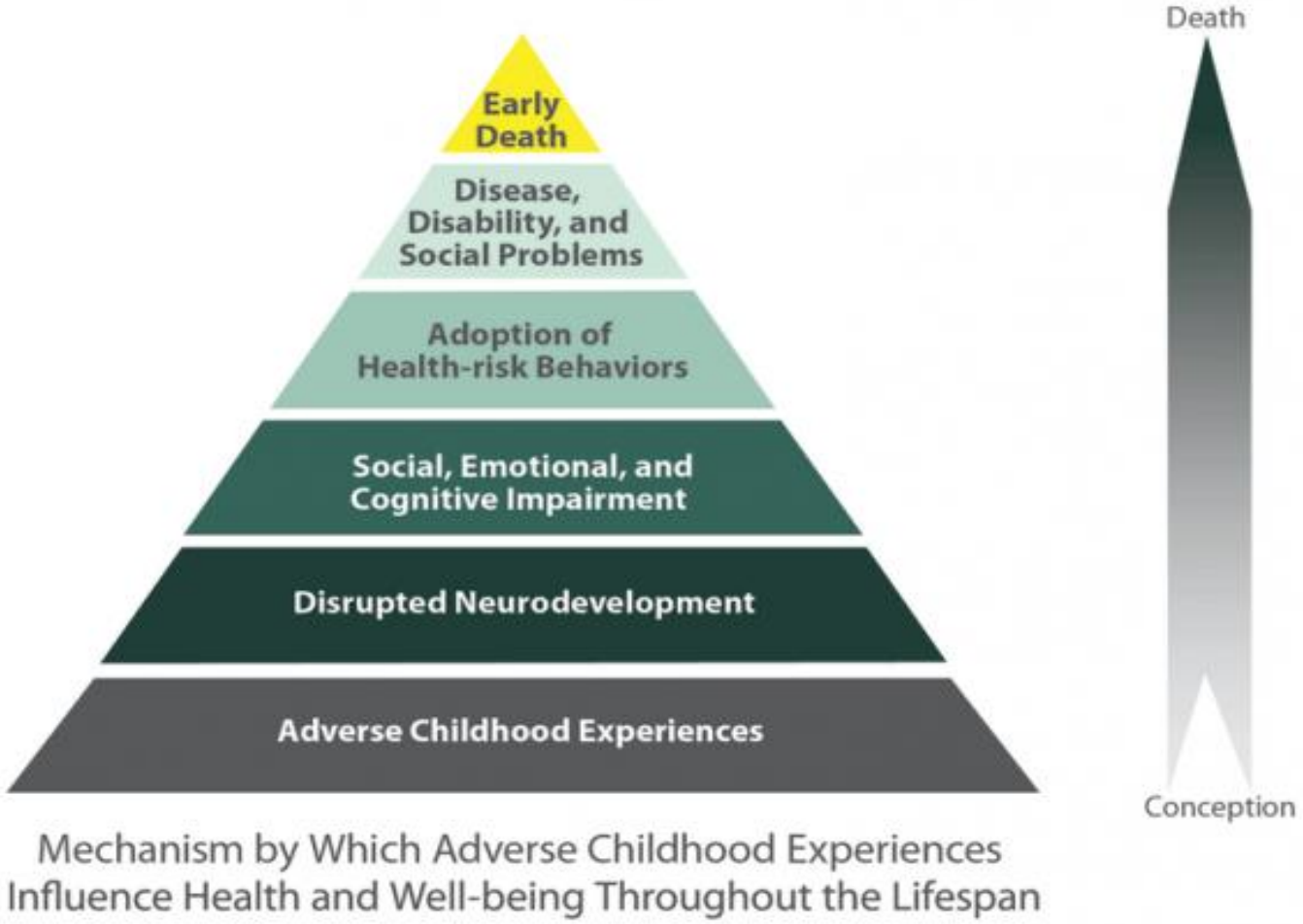
https://youngminds.org.uk/media/2142/ym-addressing-adversity-book-web.pdf



Note: incarceration, drug abuse, alcohol abuse, domestic violence, mental illness and parental separation refer to conditions within the household – family members or other residents in household experiencing these conditions. Sexual, physical and verbal abuse refer to abuse experienced by the child

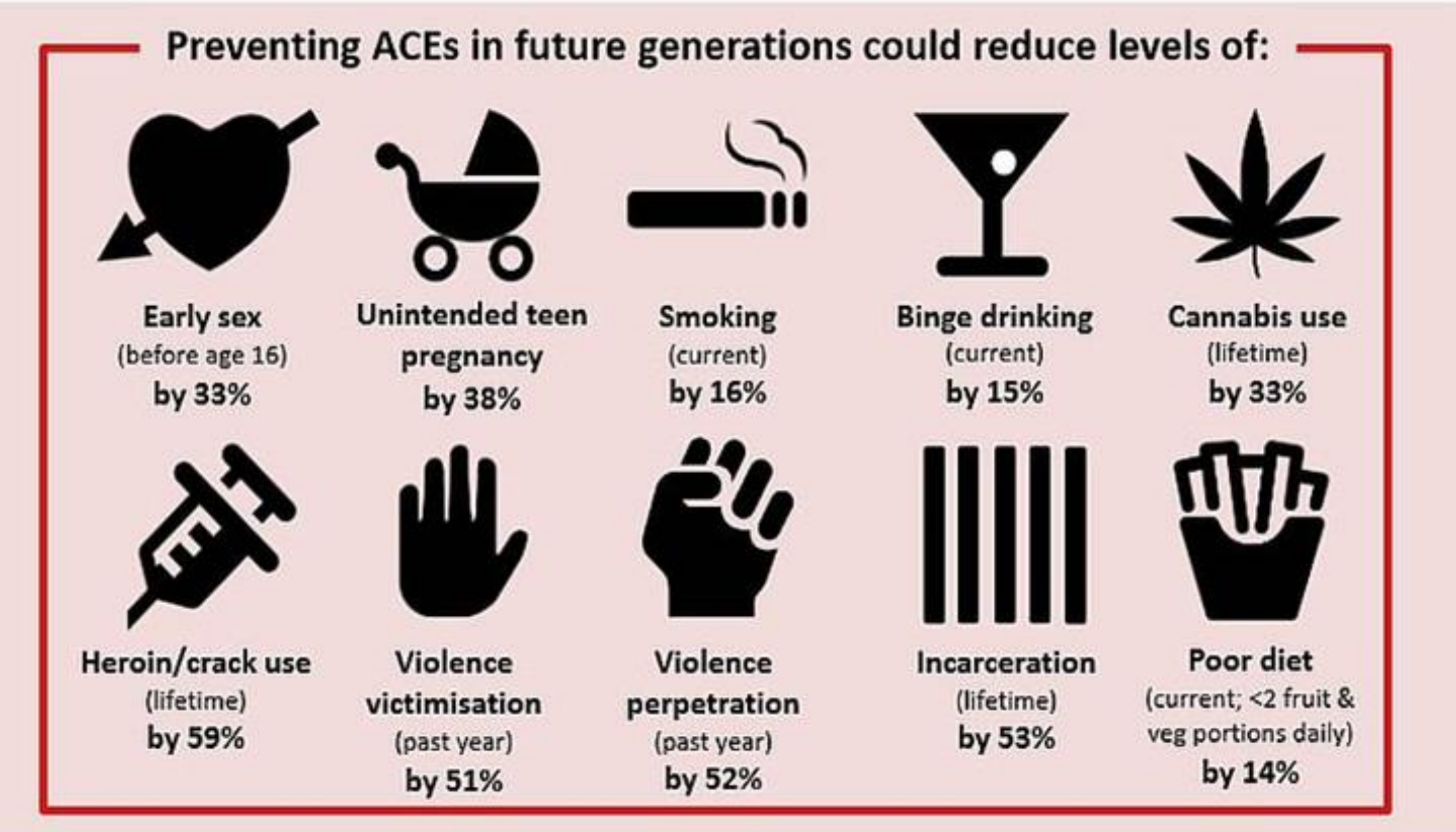
- ACES and deprivation are linked - more deprivation, more ACES
- Dose-response relationship –more ACES, greater risk of developmental delays and negative health outcomes later on
- Intergenerational effect - those who have ACES are more likely to have a parent that has experienced ACEs

ACES can trigger a range of neurobiological and neurocognitive changes impacting on all aspects of child development



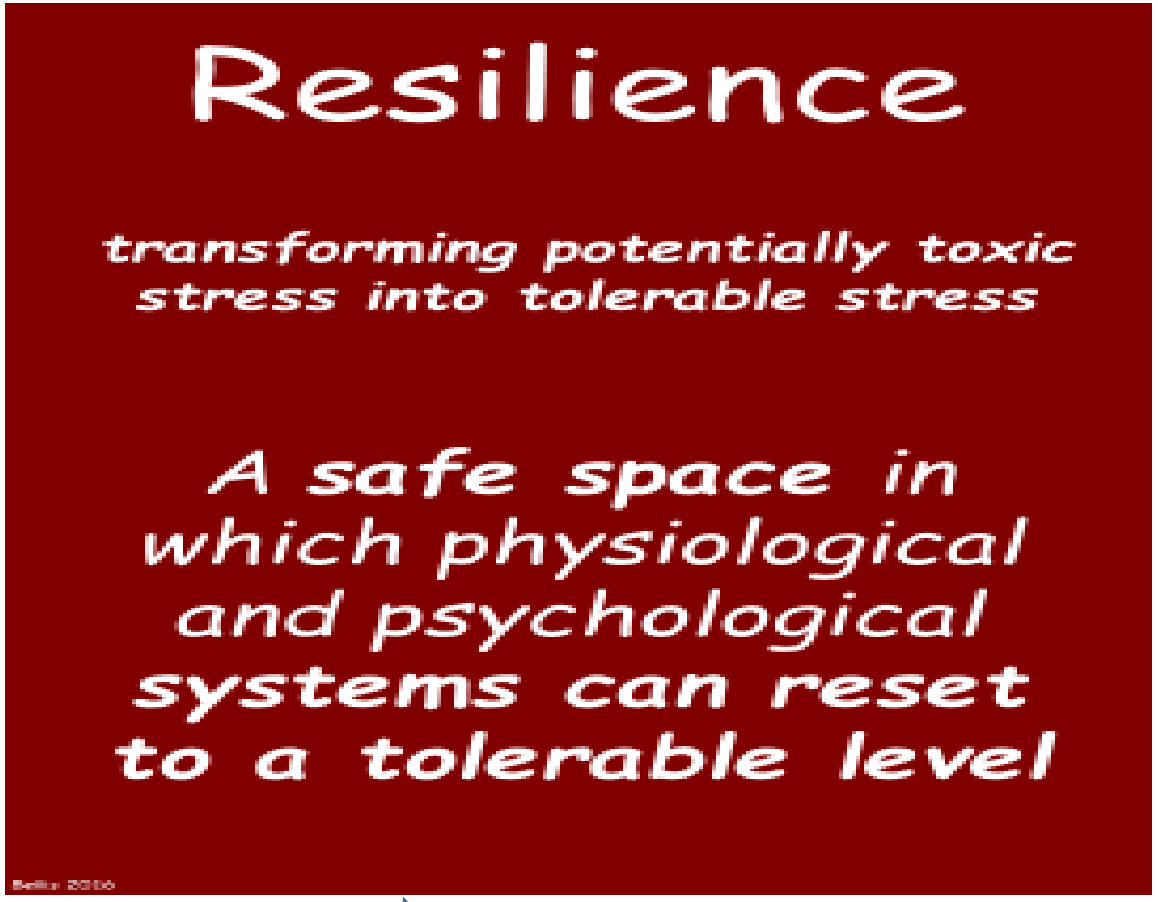
Mechanism by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

Felitti et al.,1998, Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study, available at: https://www.ncbi.nlm.nih.gov/pubmed/9635069



Bellis M et al, 2014, The English National Ace Study available here:
https://bmcmedicine.biomedcentral.com/articles/10.1186/1741-7015-12-72

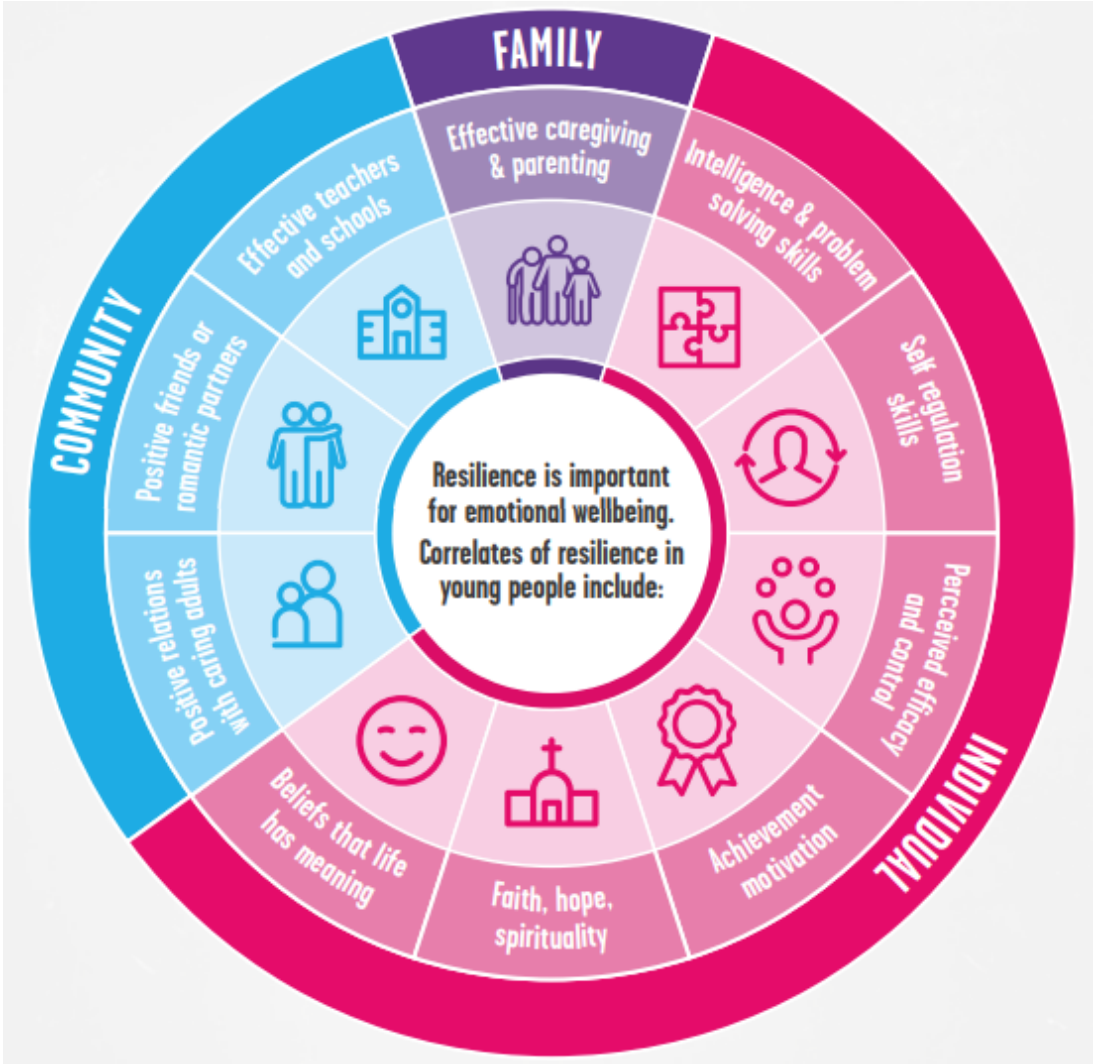
Resilience



Find out more

https://developingchild.harvard.edu/resources/inbrief-the-science-of-resilience/

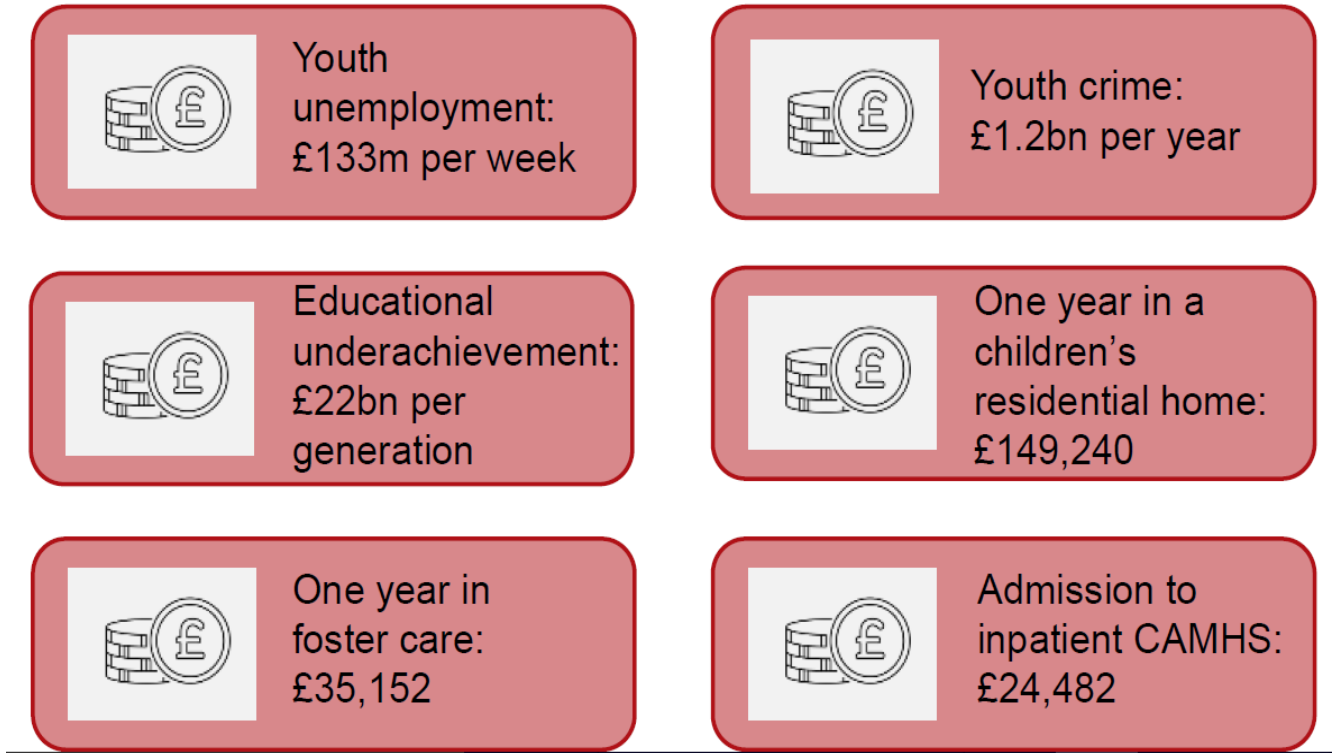
2.10 Resilience Factors



PHE (2016), and 'Addressing Adversity, Young Minds, NHS Health Education England 2018'

2.11 The Estimated Cost of dealing with a range of health and social problems

In England we spend almost £17bn per year on late intervention (EIF)



Early Intervention Foundation, the Cost of Late Intervention, Available at: https://www.eif.org.uk/report/the-cost-of-late-intervention-eif-analysis-2016

2.12 The Estimated Cost of Late Intervention in NEL, Early Intervention Foundation (EIF) analysis 2016

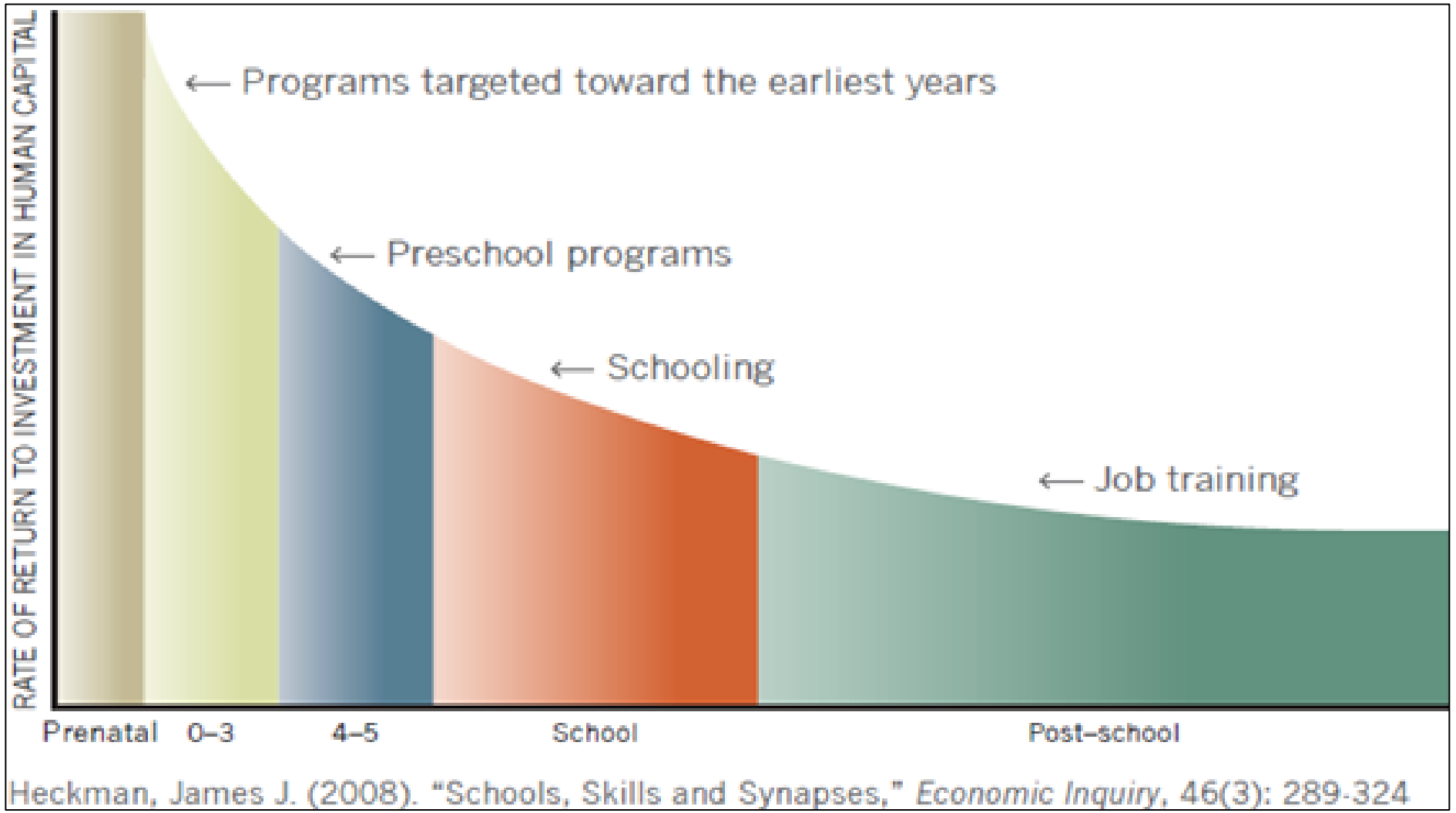
- £56 million
- £349 per person

https://www.google.com/maps/d/viewer?hl=en&mid=1ME8I5xKYNswpRP7VQZTpN9Xc6f8&ll=52.72339140007931%2C-1.6732031249999864&z=7

The cost of 'late intervention' is the money the state spends on the acute, statutory and essential benefits and services that are required when children and young people experience significant difficulties in life, many of which might have been prevented.

For more detail and background, see our report: http://www.eif.org.uk/publication/the-cost-of-late-intervention-eif-analysis-2016/

2.13 Economics of Prevention



Heckman, James J. (2008). "Schools, Skills and Synapses," *Economic Inquiry*, 46(3): 289-324