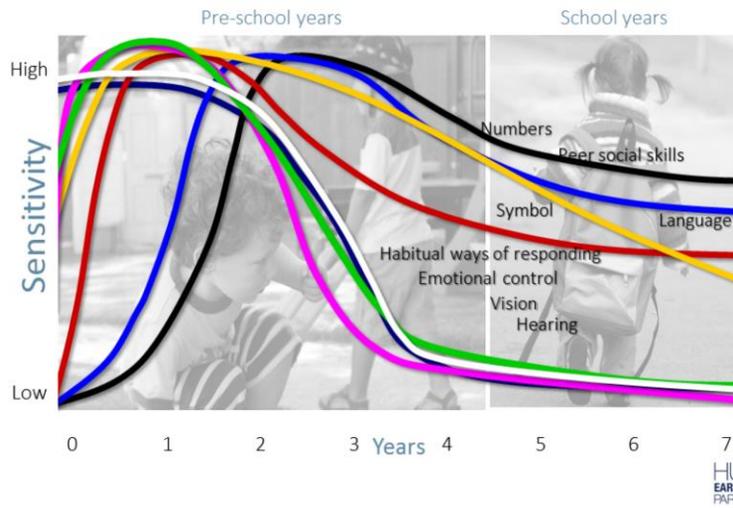




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Sensitive Periods in Early Brain Development



Key Messages

As this graphic developed by the Council of Early Child Development shows, there are a series of sensitive periods of development between zero and school age - particularly in brain and biological development. This part of the life course exhibits the densest period of brain development (or brain sculpting) according to the kinds of experiences that child has had and/or the kinds of social and environmental exposures the child has had on a broader level.

This is the period where large parts of the connections between cell and society (and society to cell) are established.

Interpreting the Graphic

The White Line

The white line represents vision.

At Birth

Face-to-breast distance of about 13 inches;

Good for looking for cues in human faces;

Understanding \square or \square and learning about the longer term biological and social consequences of interpreting those exposures.

By Age 3

Habitual ways of responding/fear responses/ambiguity responses

The Blue Line

The blue line represents language.

At Birth

Receptive and expressive vocab;

Does response relationships, where the number of words children hear in early life, make an impact?

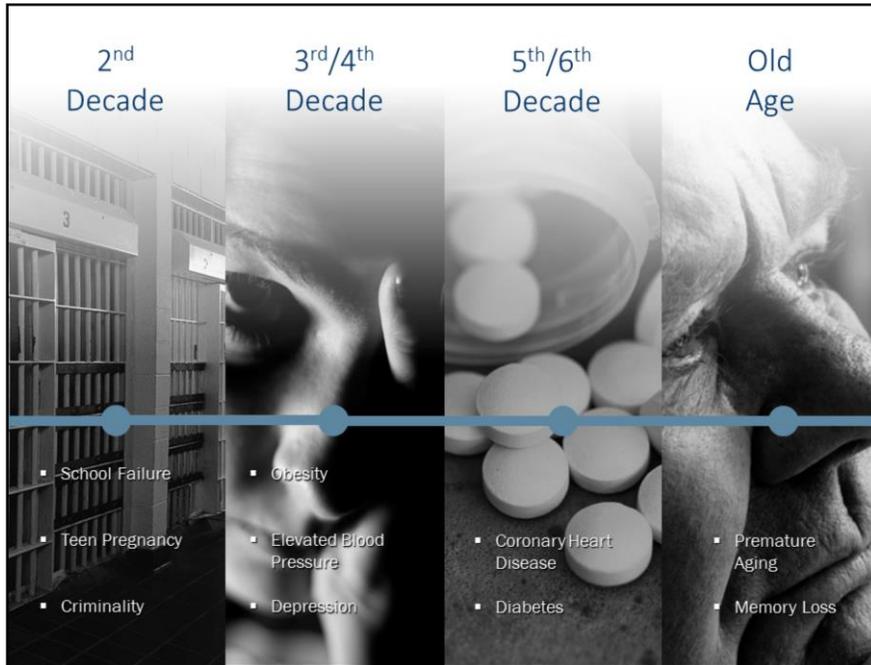
By School Age

Famous study of social gradient in US children showed there was a 30 million word gap accumulated between the most privileged children and the least privileged children (based on whether they were read bedtime stories or not) by the time they reach school.

‘Sensitive periods’ in early brain development – this slide is based on the following references:

- Doherty, G. (1997). *Zero to Six: the Basis for School Readiness*. Applied Research Branch R-97-3E Ottawa: Human Resources Development Canada.
- McCain & Mustard (1999). *Early Years Study*. Toronto, Ontario: Publications Ontario.
- Shonkoff, Jack (Ed) (2000). *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, D.C.: National Academy Press.

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Key Messages

This slide illustrates life course outcomes with roots in early childhood.

Nurturant environments promote healthy child development.

Without nurturant environments children are susceptible to the outcomes listed in this slide.

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