

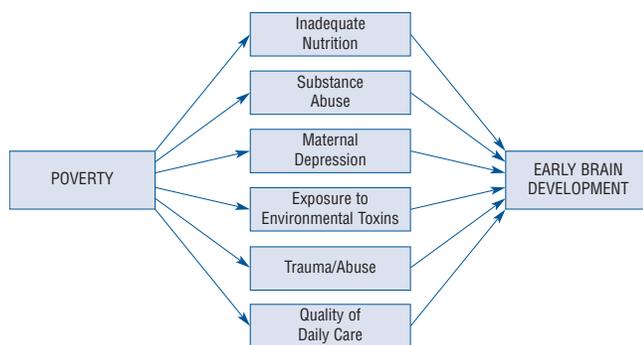


Poverty and Brain Development in Early Childhood (JUNE 1999)

OVERVIEW

Researchers have gathered new evidence on the importance of the first years of life for children's emotional and intellectual development.¹ Unfortunately, millions of American children are poor during these crucial years. More than one in five of America's children under age three lived in poverty in 1997. These 2.5 million poor children face a greater risk of impaired brain development due to their exposure to a number of risk factors associated with poverty. Many poor young children are resilient and able to overcome tremendous obstacles but poverty poses serious threats to children's brain development. Recent advances in the study of brain development show a sensitive period when the brain is most able to respond to and grow from exposure to environmental stimulation. This window of optimal brain development is from the prenatal period to the first years of a child's life. While all children are potentially vulnerable to a number of risk factors which can impede brain development during this sensitive period, a disproportionate number of children in poverty are actually exposed to such risk factors. These risk factors can influence the brain through multiple pathways.

THE IMPACT OF POVERTY ON BRAIN DEVELOPMENT: MULTIPLE PATHWAYS



Inadequate Nutrition

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. The more severe the poverty a child faces, the lower his or her nutritional level is likely to be.² Malnutrition causes social withdrawal, delayed motor skills development, and delayed physical growth, leading to lower expectations from parents/teachers and less environmental probing.

Substance Abuse

Doctors have known for years the harmful effects of nicotine, alcohol, and drugs both during and after pregnancy. Research has demonstrated that much of their impact on children stems from poor brain development, centered around stunted neurons in the brain and a lack of brain cells in crucial developmental stages, causing serious neurological disorders.³

Maternal Depression

Many children whose mothers suffer from depression lack healthy brain development. It is vital for children to be stimulated by their environment during the first years of life. Mothers who are suffering from depression are less able to provide the positive responses needed by babies, less likely to interact with their babies, and often fail to respond to their infants' emotional needs. These deficits lead to babies who are more withdrawn, less active, and have shorter attention spans.⁴

Exposure to Environmental Toxins

Exposure to neurotoxins such as lead causes brain damage and stunts the growth of the brain. One American child in six has toxic levels of lead in his or her blood; and 55 percent of African American children living in poverty have toxic levels of lead in their blood. Each year 400,000 newborns are delivered with toxic levels of lead in their blood that came from their environment.⁵

Trauma/Abuse

Experiences of trauma or abuse during the first years of life result in extreme anxiety, depression, and/or the inability to form healthy attachments to others. While physical abuse is the most noticeable, emotional and mental trauma are also damaging. Another troubling effect of early trauma is that it leads to a significantly higher propensity for violence later in life. The stressors that face poor families cause much more trauma for their children.⁶

Quality of Daily Care

Daily interaction plays an important role in a child's emotional and mental development. While the brain is forming and "learning" how to develop, consistent positive interaction is needed to ensure proper brain activity. Poor day care hinders a child's brain activity and impedes development by discouraging interaction and limiting environmental stimulation. Compared to those who were not in day care, studies show that high quality day care can in fact enhance the intellectual development of poor children.⁷

WHAT CAN BE DONE?

Reduce the Poverty Rate

Given the importance of the first years of life to the development of the brain and to the ability of children to reach their full potential, it is particularly important to reduce children's exposure to critical risk factors during early childhood. There are many important programs and services which can improve the life chances of children in poverty. Also, it is critically important to attack child poverty directly. Poverty is a primary risk factor which increases the likelihood that young children will be exposed to multiple risk factors. These additional risk factors can have important negative effects on children's brain development. Any comprehensive strategy to promote early childhood brain development must therefore include strategies to reduce the poverty rate for young children.

Every other major Western industrialized nation has been more successful in preventing the incidence of child poverty and thereby decreasing the risks to healthy brain development. The United States can learn from these countries and develop new public- and private-sector strategies to reduce the child poverty rate that are consistent with its national values and economic means.⁸

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