

Positive Life Experiences-Growth of Child's Brain

*Sukhpreet Kaur

Teacher, Bhavan's S.L Public School, Amritsar, Punjab, India

ABSTRACT

Heredity may determine the number of neurons. Children are born with and their initial arrangement, but this is just a framework. A child's surrounding environment has great impact on how these cells are wired to each other. What type of connections have been made between each other. Many parents and caretakers have understood the relevance of love therapy, affectionate interaction, loving conversations, cuddling infants closely or singing to tiny tots help children learn for better. At birth a baby's brain contains a 100 billion neurons roughly, as many nerve cells as there are stars in the milky way. During the first years of life the brain undergoes a series of extraordinary changes and eliminate connections that are seldom or never used. A child's experiences good or bad affects the wiring of his brain and connection of his nervous system. Loving affections with caring adults strongly stimulate a child's brain causing synapses to grow and existing connections to get stronger, connection that are used become permanent. So here we will discuss about how important environment is for your child's early brain development, we can discuss how to promote optimal brain development through environment. Here are a few things you can do to help encourage good brain development in your little one.

Keywords: Child Brain, environment, milky.

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*Author's Correspondence

Sukhpreet Kaur

Teacher, Bhavan's S.L Public School,
Amritsar, Punjab, India

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1. Introduction

Brain Science Vocabulary

Developmental cognitive neuroscience is a field of science that combines neurology and psychology to better understand how the physical brain affects the mind and vice versa.

Neurons are what people are usually talking about when they say "brain cells", and are the main components of your brain and spinal cord. They transmit messages to and from the brain via electrical signals across structures called synapses, which connect one neuron's "head" to another neuron's "tail."

Axons form a neuron's tail.

Myelination or myelinogenesis is a process that covers axons in a fatty substance called Myelin so that signals will travel faster through the neuron.

The nervous system is comprised of the brain and the spinal cord (the central nervous system), and nerves (the peripheral nervous system). Nerves receive input from the body through the senses (For example: "that object is sharp") which is communicated to the brain through the spinal cord. The brain then sends a response to the affected area (For example: "pull your hand away"). This exchange takes place almost instantaneously.

Structure of Brain



Neuroscience researchers has shown that early childhood is a time of tremendous brain development. The young brain literally changes shape & size in response to everything encountered in the early years of life. Environment, Life experiences, caretakers & relationships can all affect the way a child's brain circuits are wired.

2. How many brain cells does a child have?

A baby is born with roughly 86 billion neurons, almost all the neurons the human brain will ever have. Although a newborn has about the same number of neurons as an adult, it has only 25% of its adult brain volume. That's because infant's neurons are connected by only some 50 trillion neural connections, called synapses, whereas a grownup has about 500 trillion of them. This network of synaptic connections will ultimately determine how a child thinks and acts.

3. What is synaptic pruning in early brain development?

Synaptic pruning is the process in which unused neurons and neural connections are eliminated to increase efficiency in neuronal transmissions. The network of synapses grows rapidly during the first year and continues to do so during toddlerhood. By age 3, the synaptic connections have grown to 1000 trillion. But not all of the synapses will remain as the child's brain grows. Life experience will activate certain neurons, create new neural connections among them and strengthen existing connections, called myelination.

Positive Parenting

Good parenting style can do a child tremendous good. Among Authoritative & Authoritarian Parenting Authoritative parenting is better for child's Emotional & Physical growth. Both authoritative and authoritarian parents are strict and have high expectation of their kids. Authoritative parents are strict and warm, while authoritarian parents are strict and cold. Authoritative parents discuss and explain rules to their children.

"The point of discipline is to transmit values to children. The purpose of punishment is to coerce compliance and secure control, and failing that, to inflict pain as a form of revenge ... "

4. Physical Contact Help Kids Grow

Physical contact is also essential to a child's physical growth. Physicians have found that when children are deprived of physical contact, their bodies stop growing despite normal intake of nutrients. This condition is called failure-to-thrive.

Failure-to-thrive is a type of growth deficiency. The health of children who suffer from failure-to-thrive can be improved when nurturing touches and hugs are provided.

Love Hormone

Love therapy & hugging is associated with physical growth is that it triggers the release of oxytocin, also known as the love hormone. This feel-good hormone has many important effects on our bodies. One of them is growth stimulation. Studies show that hugging can instantly boost the level of oxytocin. When oxytocin is increased, several growth hormones, such as insulin-like growth factor-I (IGF-1) and nerve growth factor (NGF), are increased as well. As a result, the nurturing touch of a hug enhances a child's growth.

5. Hormone Cortisol

During distress, high level of cortisol is released circulating through the body and the brain. When left for a prolonged period of time due to a young child's inability to regulate, this toxic level of stress hormone will impact the child's health, both physically and mentally. This is why we should not just let a child go into an emotional crash. Studies show that excessive exposure to stress hormone can compromise a child's immune system resulting in more illness. Excessive stress affects memory and verbal reasoning capabilities later in life. It can also lead to depression when the child grows up.

Researches on one of body's 'stress sensitive' system shows how very stressful experiences also shapes a child's developing brain. Hormone Cortisol is released when children are to face emotional or physical stress. High level of cortisol can cause brain cells to die and reduces the connection between the cells in certain areas of the brain.

Social Interaction

Humans are social creatures, so it's not surprising that social behaviour has a profound effect on our brains and is important to child development. Social activities, positive interactions, loving conversations strengthen connections in their brains & stimulates growth of brains.

Nature Vs. Nurture in child's Development



Besides influencing how network of brain cells is formed, early life experiences also potentially has another significant impact on child's life.

Nurturing a child early in life may help the child develop a larger hippocampus, the brain region important for learning and the latest studies supports research released earlier this year that children brought up by mothers who provide love and affection are smarter and have a great capacity to learn. Children who do not experience the nurturing care necessary to enable their capacities to flourish, are less healthy, grow poorly, learn less and complete fewer grades at school, are more likely to have difficulties relating confidently to others, and earn less as adults. Without intervention, as adults they are estimated to earn close to a third less than the average annual income of their peers. This makes it harder for them and their families to better their lives, leading to debilitating, inter-generational cycles of poverty. These individual costs aggregate across society, constraining wealth creation and eroding national earnings. It is estimated that some countries spend less on health than they are predicted to lose in the future as a result of the high burden of poor early childhood growth and development. Domains of nurturing care

Nurturing care is promoted by services, information and interventions that assist parents and other caregivers to provide attentive, loving and responsive care. Nurturing care ensures that their young child

grows well, is healthy, protected from danger and is an active confident learner about other people and their world. Examples of services, information and interventions that promote nurturing care are summarized below:

6. Essential elements of nurturing care

Health

- Family planning
- Prevention and cessation of smoking, alcohol and substance use

- Antenatal care
- Childbirth care
- Prevention of mother to child transmission of HIV
- Essential newborn care with extra care for small and sick babies
- Postnatal care contact
- Kangaroo mother care for low birth weight babies
- Maternal immunization
- Childhood immunization
- Care for children living with developmental difficulties and disabilities
- Support for parental mental health
- Early detection of illness or disabling conditions (e.g., sight, hearing)
- Timely, appropriate care-seeking for sick children
- Integrated management of child illness

Nutrition

- Maternal nutrition
- Early initiation and exclusive breastfeeding
- Complementary feeding and transition to the family healthy diet
- Micronutrients as needed
- Deworming
- Growth monitoring and intervention when indicated
- Management of all forms of malnutrition

Safety and security

- Safe water
- Sanitation
- Prevention of child abuse and neglect
- Prevention and reduction of indoor and outdoor pollution
- Environments healthy, green, free of toxins
- Prevention of intimate partner and family violence
- Prevention of harsh punishment of children
- Safe play spaces in urban and rural areas

Responsive care

- Skin-to-skin contact immediately after birth
- Affectionate and secure adult caregiving in a family environment
- Guidance for children in daily activities and relationships with others.
- Daily feeding and sleep routines
- Involvement of fathers, extended family and other partners
- Social support by families, community groups and faith communities

Early learning

- Responding to children's communication through vocalizations, facial expressions and gestures
- Language stimulation through talking and singing
- Encouragement to explore objects with guidance from caregivers
- Caregiver -child play and reading and story-telling groups
- Mobile toy and book libraries
- Quality day care and pre-primary education

Guidelines

Researchers on early brain development suggests the following guidelines for the care of young children:

- Ensure health safety and good nutrition
- Development of warm and caring relationship with children.
- Talk, read and sing to children.
- Use discipline to teach.
- Recognize that each child is unique.
- Try to understand the feelings to child Hold and touch them, play with them establish routine.
- Keep in close with teachers and caregivers.
- Make sure that they are watching programmes on TV that will teach them the things you want them to learn.
- Watch for developmental delays. The human brain is an infinitely complex organ and as such, there are many things that can go wrong during its development. The best indication of a brain related developmental delay is a failure to reach developmental milestones, so if you have concerns, bring them up with your doctor. There are a variety of professionals that help deal with these kinds of delays, from psychiatrists to speech-language pathologists, and if your child is experiencing a developmental delay your doctor can recommend the specialized help they need.

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