



Factors that influences growth and mental development.

There are many things that can have an affect on your mental and physical development. Such as, your Diet, environment, poverty etc.

The main ones that this Blog discusses are. Diet, nature vs nurture and emotional development.

Diet and how it can have an effect on brain and physical development.



Davis-Monthan Air Force Base. (2019) Helps define that your diet has a massive effect on how your brain and body will develop. Either by over-consumption or malnutrition, both contribute to many different health issues. Such as, Obesity, Heart disease, Diabetes and premature mortality. Unsurprisingly a bad diet is also linked to an increase of mental health issues. Such as, Depression and anxiety. Which in-turn can then affect your sleeping habits, your ability to learn and can have a big effect on mood swings.

Services, D. of H. & H. (2023). Backs this further by saying "Did you know that your diet has a big impact on your [mood](#), your concentration and even your level of happiness? What you eat not only effects your physical health, but studies now show just how much diet impacts your mood and [mental well-being](#). There's no single super-food that boosts mood – it's about having a varied, healthy diet. A varied, healthy diet improves your memory, concentration and can even increase your level of optimism and protect you from [depression](#). In contrast, eating too many [highly processed](#), fried foods or [sugary food](#) and [drinks](#) has been shown to increase the likelihood of [anxiety](#) and increase the risk of developing depression."

Hunger can have a massive impact on your school performance. (No Kid Hungry, 2023) Helps explain this as. A survey was taken pre-pandemic on the effect of malnutrition and how it affects school life. Around 60% of children from low income communities said that they are sent to school hungry, And many of these children explained how this made their day more difficult."Nutritionally, childhood hunger can take a toll on children's cognitive development – equally harmful is the constant stress and anxiety associated with hunger. Together, these factors affect children in many ways.". Nutritional Value also has a significant modulating affect on the timing of adolescent sexual development, where as a moderate degree of obesity is associated with early sexual maturation.

In my own experience with diet, i have noticed fluctuations in productivity, mental well-being and fitness. On days where I eat healthy or even just less "junk" food i feel more

productive and have more of a willingness to learn, but on the other end of the spectrum, if i eat poorly or even if i eat less than my average intake, there is a massive dip in my productivity, and i feel my mental well-being spiral downwards. I also notice big differences in my weight, which has an effect on my state of mind and affects my motivation to workout or to better myself. I also notice dips in my brain function, feeling slower and weaker.

Your diet can significantly impact your brain development. Especially during early life, because the nutrition consumed provides the building blocks for brain cells and their connections. with a "bad" diet potentially messing with cognitive function and impacting your learning abilities by limiting essential nutrients needed for optimal brain development and growth. (Cusick and Georgieff, 2016)

Research has shown, that if you start changing out some "simple" carbohydrates and saturated fats, for "complex" carbohydrates and some healthy fatty acids, that it could really improve short term memory-loss in children. (Cusick and Georgieff, 2016).

(Prado and Dewey, 2014) help state that. Research has shown that brain development can be significantly affected by nutrient deficiencies, particularly when they are severe to moderate. However, the developing fetus has remarkable protective mechanisms that can help mitigate these effects, especially during times of placental insufficiency. For example, when nutrients and oxygen are lacking, the fetus can redirect blood flow to prioritise the brain, which is a fascinating adaptation known as "brain sparing." This means that even if overall fetal growth slows, the brain can still receive the nutrients it needs.

From personal experience, it's striking to see how nutrition impacts development. Studies in places like Bangladesh and Indonesia have revealed that when undernourished mothers receive multiple micro-nutrient supplements, their children often show improved motor and cognitive skills. Similarly, in Chile, infants with low haemoglobin levels who were given iron-fortified formula showed better cognitive outcomes years later. It's a reminder of how crucial early nutrition is for setting the stage for a child's future.

Ultimately, the extent of nutritional deficiencies plays a pivotal role in shaping brain development and can influence how effective nutritional interventions are. Understanding the specific thresholds for different nutrients is essential for addressing these developmental challenges, emphasising the importance of adequate nutrition during pregnancy for both mothers and their children. (Prado and Dewey, 2014).

(Webster, 2014) helps say that. Nutrition is incredibly important for brain development, especially from mid-pregnancy to two years of age. I've learned that during this crucial time, inadequate nutrition can lead to a smaller brain size due to reduced dendritic growth and myelination. This means that malnourished children might struggle with lasting cognitive and behavioural issues, such as delays in language and fine motor skills, lower IQ, and poorer academic performance. A mother's nutrition plays a key role in her baby's birth weight and brain size. To promote healthy brain growth, pregnant women should aim to gain

about 20% of their ideal pre-pregnancy weight, which typically means adding around 300 calories and 10-12 grams of protein to their daily diet.

For young kids, a diet rich in fats, making up about 50% of their total caloric intake is essential until around age two. This high-fat intake is vital for forming myelin, which enhances brain function and supports learning and memory. It's fascinating how much early nutrition can shape a child's future!

Nature vs Nurture on developing minds.



The Nature vs Nurture debate is a conversation that has been around for many years (over a decade), It's based on how a person's genetics and environment contribute to their development.

(Maryville University, 2020) helps say. Genes help determine what eye colour, hair colour and skin colour a person is going to have. However, A lot of human traits such as Life expectancy, weight and height, have both environmental and biological components. For example, (Maryville University, 2020) States that. "Children learn by observing the behaviour of others, so parenting styles and the child's learned experiences determine whether they behave politely or aggressively in specific situations. By contrast, learning's genetic component encompasses the biological foundation of cognitive processes, as explained in *Frontiers in Psychology*. Genetic and epigenetic contributions to the learning process are inheritable and interact with behavioural learning such as study habits and the availability of educational resources."

(Kosztolányi, 2011) helps say that. Most people believe that a child's development is due more to Nurture (environment), although a few others believe that it has more to do with nature (hereditary). There has also been an exchange of views on whether development is more continuous or discontinuous. A child's development is often described in terms of critical periods. (Kosztolányi, 2011) also helps state. A "critical period" in developmental biology refers to a specific window of time during a child's development where it is particularly sensitive to environmental stimuli. Meaning that experiences during this period can have a consequential and lasting impact on the development of certain traits or abilities, often with irreversible consequences.

The nature versus nurture debate goes into how your genes (nature) and your environment (nurture) shape who you are, influencing your growth and mental development. Nature refers to the genetic factors you inherit, which can influence traits like intelligence, temperament, and even your vulnerability to certain mental health conditions. For instance, some people may have a genetic predisposition to be more introverted or more anxious, which can affect how you develop emotionally. Nurture, on the other hand, refers to the environmental influences you experience, such as your upbringing, relationships, and the culture around you. These factors can have a profound impact on your mental development, helping you develop skills like emotional regulation, communication, and problem-solving. A supportive and encouraging environment can boost your self-esteem and cognitive abilities, while a neglectful or abusive one can hinder your emotional growth and even lead to mental health challenges.

In my own experience, I've seen how both nature and nurture play roles in shaping who I am. I've inherited certain traits, like a strong attention to detail, but my upbringing, including my mother's emphasis on emotional support and learning, has shaped how I approach challenges. The balance of both influences highlights how complex and interconnected human development is, with no single factor fully determining our growth. Essentially, it takes both nature and nurture to determine how your brain is going to develop, and what type of person you are going to be. Take language for example, yes you learn the language

that you speak from social aspects and learning. But some people believe that there are predisposed genetics also aiding your language development.

(www.nottingham.ac.uk, n.d.) helps state that. Language development refers to the process through which a child learns to communicate, understand, and use language. It begins in infancy, as babies start to recognise sounds, and progress through stages such as babbling, single-word speech and two-word phrases. Cognitive and social interactions play a critical role, as a child will observe and imitate the speech of those around them. Language development includes acquiring vocabulary, grammar, pronunciation, and the ability to form meaningful sentences. This is influenced by various factors, including genetics, environment, and social experiences. This process continues throughout childhood, helping children develop the skills needed for reading, writing, and effective communication in society.

The Jim Twins:

The story of the Jim Twins, Jim Lewis and Jim Springer, is truly fascinating and challenges our understanding of the nature versus nurture debate in science and psychology. Their remarkable tale, which began in the late 1970s, highlights the powerful influence of genetics while also exploring how environment shapes our lives. The twins were born in Ohio in 1940 and were put up for adoption at just three weeks old. Each was adopted by a different family: Jim Lewis went to the Lewis family in Lima, while Jim Springer was adopted by the Springer family in Piqua. Interestingly, both boys were named “Jim” by their adoptive parents, which was just the beginning of the uncanny coincidences.

Despite growing up in different households, their lives paralleled in astonishing ways. Both pursued careers in law enforcement—one as a security guard and the other as a deputy sheriff. They shared hobbies, such as mechanical drawing and woodworking, and both experienced two marriages, each first marrying a woman named Linda and later marrying a Betty. Their sons were even named James Alan and James Allan, and both families owned dogs named Toy. Remarkably, both sets of adoptive parents vacationed at the same beach in Florida, though at different times. The journey to reunite began when Jim Lewis sought to find his biological family, leading him to discover his twin brother, Jim Springer. Their emotional reunion in 1979 on the “Phil Donahue Show” captivated audiences, turning them into household names and igniting widespread fascination with their extraordinary story. (Carmean, K. 2023).

Social and Emotional development.



(www.nottingham.ac.uk, n.d.) helps define.

social development:

Social development plays a significant role in how you grow emotionally and mentally. From the time you're young, to the relationships you form with family, friends, and even peers at school influence your sense of self-worth and emotional well-being. These connections are the foundation on which you build your personalities and life skills. Positive social interactions can boost your confidence, and communication skills, which are essential for personal growth.

Social and emotional development is the process in which children learn to understand and manage their emotions and form relationships with others.

(r4.vlereader.com, n.d.) helps define this as. A child's genetic heritage can also have an effect on their environment. (Caspi & Moffitt 2006) A circumstance that could happen via two routes. First, the child in question inherits their genes from their parents, who create the environment as well. An example would be if, the parents themselves had "high" IQ scores. Then they are likely to pass their "high" IQ genes onto their child and therefore also create a richer and more stimulating environment for their child. Correspondingly, A child who inherits a proneness toward aggression or hostility from their parents, are also likely to live in a environment that is most likely excessive in criticism and negativity. The

reason for this is that, these are the expressions of the parents own genetic tendencies regarding aggressiveness or hostility. (Reiss, 1998).

(r4.vlereader.com, n.d.) also state that. Every child has a different pattern of inherited qualities. And each quality has an effect on the way A child behaves with other people. Which therefore affects the way adults and other children respond to The child in question.

A grouchy or temperamentally demanding baby, may receive less smiles and more reprimand than a baby that is more calm and even tempered. (r4.vlereader.com, n.d.) also stats that, a more genetically intelligent child could demand more personal and close attention from parents and others, they might also, ask more questions or seek out more complex toys than would a less genetically intelligent child. This basically boils down to, A child's elucidation of the prior experiences are mostly affected by all their inherited tendencies.

I would like to touch on my own experience with this topic. My own mothers nurturing parenting techniques led me to gravitate towards more challenging toys as a child. the lack of criticism and judgement in my childhood allowed me to express my knowledge and understanding from young age through complex toys such as puzzles, building blocks and academic games. But i also think this stems from my mothers higher IQ being genetically passed on to me.

Although not all social influences are positive. And some negative experiences can have long lasting effects. For example, bullying or a lack of emotional support during important stages can mess with mental development, leaving you struggling with self-esteem or social anxiety. On the other hand, a nurturing, supportive environment helps you to develop healthy coping mechanisms and a balanced sense of identity. In my own life, I've seen how the people around me can shape how I feel about myself. Support from friends and family has helped me navigate challenges, while social isolation or toxic environments in the past have made me more cautious and sometimes unsure of myself.

Understanding how social factors affect your mental and emotional growth reminds you that building strong, positive relationships can truly influence who you become and how you handle life's ups and downs.

(Cusick and Georgieff, 2016). "Every child has a right to optimal cognitive, social, and emotional behavioural development. The cognitive, social, and emotional parts of the brain continue to develop across the lifespan. However, the brain's growth and development trajectory is heterogeneous across time. A great deal of the brain's ultimate structure and capacity is shaped early in life before the age of 3 years¹. The identification and definition of this particularly sensitive time period has sharpened the approach that public policies are taking related to promoting healthy brain development. The ramifications are large because failure to optimise brain development early in life appears to have long-term consequences

with respect to education, job potential, and adult mental health². These long-term consequences are the “ultimate cost to society” of early life adversity”.

(Johnstone et al., 2022) Research shows that children in nature-based early childhood education (ECE) tend to develop better social skills and emotional growth. From my perspective, this improvement might stem from three main factors: the variety of play they engage in, the boost to their creativity and imagination, and the opportunities for positive interactions with peers and teachers. In nature-based settings, children have more diverse play experiences compared to traditional ECE, which helps them cultivate stronger prosocial skills. Through imaginative play, they create and share stories, acting out different scenarios that enhance both their creativity and understanding of social interactions.

While the data suggests that children in these environments improve their social skills and interactions, it's less clear how this impacts their ability to form and maintain positive relationships. I found it interesting that one study noted some negative interactions between children and teachers in natural playgrounds, emphasising that this area needs more attention. Overall, I believe that nature-based ECE offers valuable benefits for children's social development, but it also highlights the importance of fostering positive connections in these settings. (Johnstone et al., 2022).

Some fun games that can boost the social and emotional development in school students or young children.

This includes: "Red light, green light". red light, green light is essentially, running when a lead player shouts "green light" and coming to a complete stop when they then yell "red light". The aim is to be the first person to reach the lead player. (Ph.D, 2022)

"Mirror, mirror". In this game one player will make a certain face and the other player will try to mirror that face. To play this in more depth u could have the mirroring player try and identify the emotion that they are mirroring. (Ph.D, 2022)

Conclusion.



In conclusion, I believe that diet, nature/nurture, and social and emotional development is key to physical and mental development. There is a lot of significant research that goes into these studies and i believe that with more publishing of articles and research papers, people will start to take these things more serious, and start to implement them into there day to day life.

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AI declaration

I confirm that i have not used any AI tools in the research and creations of this assignment. I confirm that i have not presented any AI generated materials as my own work. i confirm i have copies of my drafts, notes, and other resources i used, which i may be asked to provide in evidence.