



ECEY4005 Digital Portfolio

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The First 1000 Days



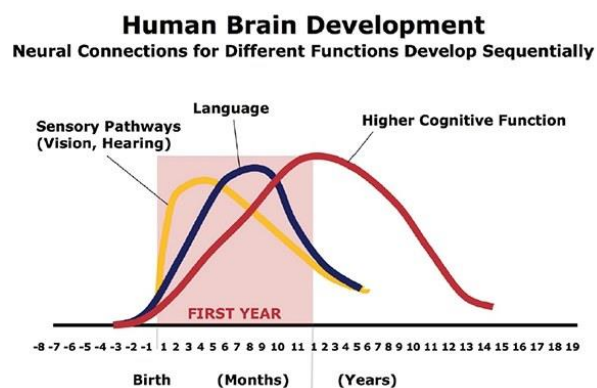
During the first 1000 days, an infant will experience a period of rapid development (Nelson, 2000). This is when the foundations of the brain's architecture are built. Nelson (2010) discusses how every human being carries a genetic blueprint that sets the sequence and timetable for brain development from the first days of life. Construction of the basic architecture of the brain begins before birth and develops rapidly thereafter. In the earliest years, an infant's brain forms as many as one million new synaptic connections each second. The diagram below demonstrates an infant's rate of development from conception.

The process begins with the development of simple sensory pathways for basic functions such as vision and hearing, followed by more complex circuitry that supports children's emerging language

mastery and a wide range of higher cognitive functions. This is recognised as a peak period of brain development in infants.

This period also marks the time when children's neural circuitry is most flexible and receptive to their earliest interactions and environments. This diagram reflects how consistently stimulating and nurturing early experiences in infancy can create robust, efficient pathways throughout regions of the brain controlling memory, language, reasoning, impulse control and other competencies.

Save the Children (2016) agrees with Nelson (2000) theory, suggesting that during this period from conception to age two, infants are uniquely susceptible to their environment, in particular, the home learning environment can play a critical role in a child's development. Furthermore, infants are also completely reliant on their caregivers during this time. This dependency emphasises the crucial role parents and carers play in influencing a child's physical, emotional and cognitive development.



1 - Source: Nelson (2000)

This digital portfolio will discuss and critically evaluate an infant's development in the first 1000 days. Including, current challenges and approaches of caring for an infant within a setting, each supported by different theories and research. The importance of creating stimulating environments, both indoors and outdoors, to support an infant's holistic development. The early relationship's infants form and their significance in child development. As well as critically evaluating the importance of respectful care and the opportunity to engage in meaningful learning opportunities for infants in settings.

Early Relationships



From birth, babies' brains are ready to begin making connections, many of which are made in the first two years of life. As a result of being active and involved and by learning through exploration, discovery and interactions with others, development takes place (Learning and Teaching Scotland, 2005). It is natural for babies to search for and seek out interactions with their caregivers as they provide a model or "mirror" of interpersonal interaction (Dellinger-Bavolek, 1996).

(Quiñones, 2017) emphasises how loving, stable, and responsive relationships are fundamental to a child's development. Through relationships, children learn how to think, understand, communicate, behave, express emotions, and develop social skills. Skills that best develop when a baby has at least one stable and committed relationship with an adult. The secure attachments infants form with their primary caregivers will make them feel safer and more secure in their environment. Strong relationships build the emotional scaffolding to support early development in children.

Serve and Return

HD Government (2021) recognised that some of the most important experiences that will shape the architecture of a baby's brain come from their interactions with significant adults in their lives. Babies naturally reach out for interaction with eye contact, facial expressions, gestures, babbling, or touch. A responsive caregiver will respond by speaking back, using kind sounds, gestures or sharing a toy or a laugh. This process is known as 'serve and return'.

Serve and return interactions shape brain architecture. These back-and-forth exchanges are the building blocks of children's early brain development. Each time a caregiver responds to a child's gesture, with appropriate actions such as, eye contact, words, or a hug, neural connections are built and strengthened in the child's brain that support the development of communication and social skills.

Furthermore, this process helps children learn how to control their emotions, cope with stress, and learn skills that will serve as a foundation for later development (Davis, 2017). A sensitive and responsive caregiver should provide an environment rich in serve-and-return experiences.



2 - Centre on the Developing Child at Harvard University (2011).

Importance of Touch

One of the primary means of communicating with a baby is through touch. Nurturing physical touch promotes healthy physiological development in humans (Narvaez *et al*, 2019). Children learn to be human through touch. Touch is the earliest form of sensory experience for a developing infant, starting from as early as conception. The womb provides a constant sensation of being held for the child. After birth, babies expect a similar level of touch, by being held and comforted by their caregiver.

Crucianelli et al (2013) research discusses the importance of human touch to healthy brain development. Researchers found that loving touch, characterized by a slow caress or gentle stroking increases the brain's ability to construct a sense of body ownership and plays a big part in creating and sustaining a healthy sense of self in children. Furthermore, nurturing physical touch promotes development of young children's physiological systems involved in regulating emotions and stress responses.

Physical touch such as holding, and rocking are the most effective ways to calm and soothe a distressed baby. Repeated experiences of being soothed when distressed prepares children's ability to self-regulate emotions and to better identify how to calm strong feelings. Children who have this ability to calm their strong feelings are better able to understand the feelings and thoughts of others. Anisfeld (1990) suggests this can lead children to form more positive relationships. Therefore, nurturing physical touch can support children's prosocial development, the ability to be kind, caring and helpful.

Touch also plays an important role, both in the early development of physical and communication skills and in a child's ability to participate in physical activities (Hertenstein, 2002). Activities that incorporate a child's touch and movement are beneficial as children learn by feeling different objects. This is especially beneficial to kinaesthetic learners, children that learn from more tactical

and physical activity. The act of touching stimulates sensors within muscles and joints, essentially each time a child touches something, the brain receives a message and makes a decision. The caregiver is responsible for providing and assisting children with different sensory activities to explore their sense of touch. Maintaining a strong and secure relationship with the child will allow the parent or caregiver to easily introduce and assist the child in these different activities to further aid their development. Activities such as:

- **Manipulate different materials.** Babies increase their coordination and muscle strength by exploring various materials. For example, squishing playdough improves hand strength, picking up smaller objects encourages the use of the pincer grasp (between the thumb and index finger) and finger painting promotes pre-literacy skills.
- **Build muscle strength.** Rolling, pushing, striking and throwing objects encourages large muscle strength. Additionally, crawling or walking over different materials helps children develop an awareness of their bodies, and picking up objects supports hand-eye coordination.
- **Explore textures.** Touching and manipulating objects with different textures helps develop a child's touch. Providing a variety of different textured objects such as smooth/rough, hard/soft, wet/dry, light/heavy and warm/cold is beneficial.
- **Practice identification.** Caregivers can place assorted everyday objects in a box and allow their child to use their sense of touch to identify the objects without looking.



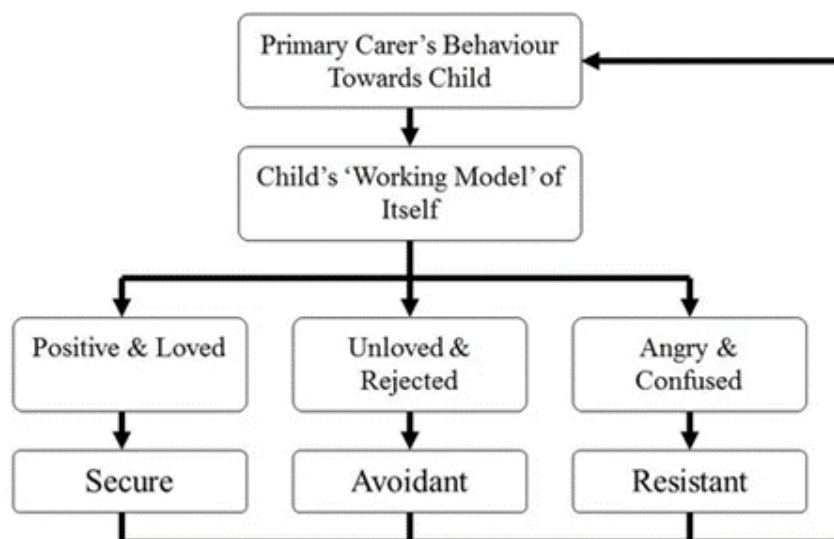


Attachment Theory



Bowlby developed a model to explain the emotional bonding between children and their prime carer, also known as attachment theory (Wilson-All, 2019). Bowlby proposed that children are pre-programmed from birth to develop attachments and maintain proximity to their primary attachment figure. Attachment behaviours allow infants to stay close to their attachment figure by either demonstrating signalling behaviours, such as crying and smiling, or approach behaviours, such as following and clinging (Ainsworth & Bell, 1970). Bowlby also believed that children could develop secondary attachment figures, known well by their primary attachment figure (Bowlby, 1969). Secondary attachments could provide children with security in the absence of their primary attachment figure, to include extended family or professional practitioners in an early years setting.

Maintaining a strong attachment relationship with a child, plays an important role in supporting children to develop to their potential (Colmer et al, 2011) and influence future physical and mental wellbeing (McCain et al, 2007). An infant's brain is effectively shaped by their early experiences and the quality of these experiences has a substantial effect on development.



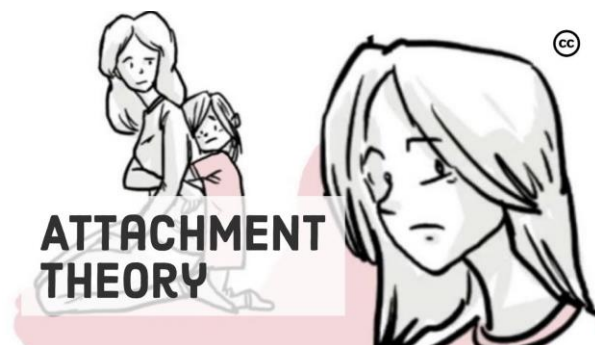
3 - Source: Simply Psychology (2022).

Bowlby proposed three main attachment styles based on a child's experience in early relationships, as shown in the diagram above (Holmes, 2006). He proposed that early interactions with caregivers can both shape how a child understands and behaves in childhood relationships but can also impact and carry through into adult attachment.

Secure attachment: This style signifies a warm and loving bond between carer and child. The child feels loved and cared for and develops the ability to form healthy relationships with those around them. Children with secure attachment styles are active and demonstrate confidence in their interactions with others.

Avoidant attachment: Children who have developed under the 'avoidant' style have learned to accept that their emotional needs are likely to remain unmet and continue to grow up feeling unloved and insignificant. They often struggle with expressing their feelings and find it hard understanding emotions.

Resistant attachment: Also referred to as 'Anxious-ambivalent' attachment includes children that distrust caregivers. This insecurity often means that their environment is explored with trepidation and little to no excitement.



4 - Bowlby's Attachment Theory explained (Sprouts, 2018).

Bronfenbrenner's Theory



Bronfenbrenner's theory emphasises that within an early years setting it is important to create an inclusive environment for all children. In order for children to develop to their fullest potential, he believes they must feel valued and maintain strong relationships with the people closest to them (Hayes et al, 2017). Bronfenbrenner's model was based on the child being at the centre of an ecological system, as shown in the diagram. His theory consists of the following four parts:

The microsystem- This is the immediate environment in which the child spends most of their time. Here, the child will typically remain active and confident. The long-term relationships within this microsystem have a stable and long-lasting effect on the child's development, primarily the child's main caregiver.

The Mesosystem- This is the child's extended environment. Examples of this include extended family, school, nursery, community and so on.

The Exosystem- These types of setting can influence a child's development; it does not directly involve the child. This can include media, politics, neighbours, industry and so on.

The Macrosystem- This is the much wider reaching ideology, laws, regulations, and cultural influences.



The Learning Environment



It is essential that the parent or caregiver provides the child with an engaged learning environment. An engaging learning environment will increase a child's attention and focus, promotes a meaningful learning experiences and encourages higher levels of performance and critical thinking skills (HM Government). Emmi Pikler's research also encourages caregivers to facilitate child development by utilising the learning environment.

Pikler's Theory

Emmi Pikler developed an original and successful approach to caring for young children. Duncombe (2019) stated the two main principles of the Pikler approach as:

- The outstanding importance of a peaceful and respectful care in the relationship of the infant and the adult caregiver.
- The allowance of complete freedom of movement according to the child's developmental stage.

These two primary principles are both essential and interdependent. The infant's ability to enjoy self-initiated movement and play is dependent on a foundation. of a caring and respectful relationship with an adult. The calm presence and unhurried time of care with the adult, particularly during times of bodily care such as nappy changing, feeding and bathing, are internalised and provide the infant with a secure, trusting core from which to explore themselves and their environment. Through self-initiated movement and play, the child is able to follow their natural

inner motivation and curiosity about themselves and their world. This fosters a healthy self confidence in their own abilities and promotes a natural independence. Healthy infants have a natural motivation to explore and try new movements and they find deep pleasure in practising and finally mastering moves and developing new abilities. Pickler's theory emphasises how infants do not need adults to assist this natural process. Instead, Pickler encourages the carer, who is aware of their intrinsic needs, to provide an appropriate environment with suitable play objects.

An important aspect of the Pickler approach is how the adult responds and interacts during times of self-initiated play. Interference is kept to a minimum as it is recognised that infants need to find out about their body and surroundings themselves, including overcoming small frustrations, in order to integrate new learning and development. The carer is instead expected to focus on how to facilitate safe and satisfying self-initiated exploration, only intervening when absolutely necessary (Kallo & Balog, 2005).

The Pickler research also informs us that, given the opportunity and freedom, healthy infants and toddlers are active and self-regulating and will move position on average every two minutes (Pickler, 1971). Pickler stressed the fundamental importance of placing a very young infant on his back to sleep or to play. From this first position, a baby's intrinsic spontaneous movements enable him to turn himself over when he is developmentally ready to be in a new position. On his back, a healthy young infant is in a position of greater ease, mobility, and mastery, where his gross motor skills can develop naturally through his own self-directed explorations.

To facilitate natural gross and fine motor progression, the environment needs to be appropriate. Gross natural motor development cannot be separated from the fine motor development which progresses in parallel. The infant, through its natural curiosity, is drawn to explore objects. Simple toys of various weights and shapes provide many opportunities for fine motor skills to be developed and for gross movement to be encouraged. The environment needs to be set up appropriately for this to happen. The adult needs to observe and see what is interesting to the child and make sure that the child's explorations are encouraged. There are, for example, pieces of equipment which encourage free movement, balance and exploration indoors as the infant becomes mobile:

- A safe fenced off area for babies to be on backs and crawling if in a group setting.
- Platform, ramps and steps.
- Tunnels.
- A frame ladder/Pikler Triangle.
- Boxes and slides.
- The Pickler Institute has developed nappy changing tables which allow the child to move freely and safely in the special moments of relationship based physical care.



5 - An infant experimenting with positions on some steps and reaching for toys (Duncombe, 2019).



6 - Pikler triangle (Duncombe, 2019).



7 - A Pikler style nappy changing table, used to promote safe and free movement (Duncombe, 2019).

Conclusion



During an infants first 1000 days they will experience rapid development, influenced greatly by their early relationships and attachments and in part their environment. It is crucial for parents or caregivers to recognise the importance and implement each of the theories discussed to provide their child with the best opportunities moving forward. The development the child achieves over the first 1000 days will influence the child's further development over the next 1000 days.

Bibliography

Ainsworth, M. D., & Bell, S. (1970) Attachment, exploration and separation: Illustrated by the behaviour of one-year-olds in a strange situation. *Child Development*, 41(1), 49–67.

Anisfeld, E, Casper, V, Nozyce, M, & Cunningham, N. (1990) Does infant carrying promote attachment? An experimental study of the effects of increased physical contact on the development of attachment. *Child Development*, 61, pp. 1617–1627.

Bowlby, J. (1969) *Attachment and loss: Volume 1. Attachment*. New York: Basic Books.

Centre on the Developing Child at Harvard University. (2011) *Serve & Return Interaction Shapes Brain Circuitry*. Available at: https://www.youtube.com/watch?v=m_5u8-QSh6A&t=9s. (Accessed 22/01/23).

Centre on the Developing Child at Harvard University. (2015) *Serve and Return*. Available at: <https://developingchild.harvard.edu/science/key-concepts/serve-and-return/>. (Accessed 22/01/23).

Colmer, K, Rutherford, L, & Murphy, P. (2011) Attachment theory and primary caregiving. *Australasian Journal of Early Childhood*, 36(4), 16–29.

Crucianelli, L, Metcalfe, N, Fotopoulou, A and Jenkinson, P. (2013) Bodily pleasure matters: velocity of touch modulates body ownership during the rubber hand illusion. *Frontiers in Psychology*. Vol 3. Article 703.

Davis, C. (2017) *Room to Grow : A Study of Parent-Child Relationships*. Toronto: University of Toronto Press.

Dellinger-Bavolek, J. (1996) 'Infant Massage: Communicating Love Through Touch', *The International journal of childbirth education*, 11(4), pp. 34–37.

Duncombe, R. (2019) *The physical development needs of young children*. Edited by R. Duncombe. Abingdon, Oxon ;: Routledge.

Hertenstein, M.J. (2002) 'Touch: Its Communicative Functions in Infancy', *Human development*, 45(2), pp. 70–94.

HM Government. (2021) *The Best Start for Life: A vision for the 1001 critical days*. The Early Years Healthy Development Review Report. Available at [The best start for life a vision for the 1001 critical days.pdf \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/978431/the-best-start-for-life-a-vision-for-the-1001-critical-days.pdf). (Accessed 22/01/23).

Holmes, J. (2006) *John Bowlby and Attachment Theory*. First edition. Boca Raton, FL: Routledge.

Kallo, E and Balog, G. (2005) *The Origins of Free Play*. Pikler UK Association.

Learning and Teaching Scotland (2005) *Birth to Three: Supporting Our Youngest Children*. Edinburgh: Learning and Teaching Scotland.

McCain, M. N., Mustard, J. F., & Shanker, S. (2007) *Early years study 2: Putting science into action*.

Narvaez, D. *et al.* (2019) 'The importance of early life touch for psychosocial and moral development', *Psicologia, reflexão e crítica*, 32(1), pp. 16–17.

Nelson, C.A. (2000) Neural plasticity and human development: the role of early experience in sculpting memory systems. *Developmental Science*. Pp 115-130.

Pikler, E. (1971) Learning of motor skills on the basis of self-induced movements. In *Exceptional infant*. Vol. 2. ed. J. Hellmuth, 54–89. New York: Bruner.

Quiñones, G, Liang, L & Ridgway, A. (2017) Studying Babies and Toddlers : Relationships in Cultural Contexts. Singapore: Springer Singapore Pte. Limited. (Accessed 22/01/23).

Save the Children (2016) Lighting up young brains: How parents, carers and nurseries support children's brain development in the first five years. Available at: [lighting-up-young-brains.pdf \(savethechildren.org.uk\)](https://www.savethechildren.org.uk/lighting-up-young-brains.pdf). (Accessed 22/01/23).

Simply Psychology. (2022) 'What Is Attachment Theory: The Importance of Early Emotional Bonds'. Available at: <https://www.simplypsychology.org/attachment.html>. (Accessed 22/01/23).

Sprouts. (2018) The Attachment Theory: How Childhood Affects Life. Available at: <https://www.youtube.com/watch?v=WjOowWxOXCg>. (Accessed 22/01/23).

Vygotsky, L. S. (1994) Chapter 5: The problem of the cultural development of the child. In R. van der Veer & J. Valsiner (Eds.), The Vygotsky reader . Oxford/Cambridge, MA: Blackwell.

Wilson-All, N, Barratt-Pugh, C and Knaus, M. (2019) Australasian Journal of Early Childhood: 'Multiple perspectives on attachment theory: Investigating educators' knowledge and understanding'. London: SAGE.