Brain Development

All children are born wired to connect, to feel, and to learn. One of the key roles played by those working in the Early Childhood and Education and Care sector is to support that growth and development. Early environments matter – the physical environment, the relationships between children and those who educate and care for them, the experiences children have – and these environments and relationships are essential for connection and for growth.

First, let's look at what the research says

The recent key findings about how children's brains grow and develop tell us:

- Brain development is always changing, and is impacted not just by chemical and physical growth inside the brain itself, but also by the experiences that a child has, especially in the first 5 years.
- Development isn't always predictable – each person has their own path to travel – and that pathway is influenced by the relationships they have with others, events in their lives, their biology, the transition times in their life (such as starting childcare, losing a pet or family member, moving house etc.)
- One of the biggest influences on how a child's brain develops is how the child is able to have a balance of sources of vulnerability (such as needing to be cared for, experiencing big feelings, experiencing grief and loss) and resilience (being able to recover from experiences and times when they have been vulnerable). It is important that children learn to deal with both kinds of experience in order to learn and grow.
- Learning to self regulate (manage your own feelings in a safe way) is a key part of early childhood, and one which influences all aspects of who the child is becoming
- Children aren't passive in their development – the journey of growing up isn't something that just happens to them, all children have the desire to drive, explore and master the places and spaces, and experiences, that they are a part of
- All children – all people – are different, and that makes it difficult to determine what is "normal" or "immature" versus what might be a cause for broader concern.

So what do these findings mean for educators?

They mean that the experiences children have while in our care are important – they impact on their brain development, and are part of the important "relationship learning" that helps brains grow. They mean that, while knowing about developmental milestones is important, educators need to be aware that each child is an individual – having a good relationship with children and families will help you be more attuned to when something might be a concern. They mean that educators should be aware that children are learning to manage their own feelings, and that this learning – which involves trial and error, and sometimes behaviours that challenge us – is hugely important to how their brains are growing, changing and forming. The findings also, perhaps most importantly, remind us that children need to experience a wide range of moments – happy and sad, easy and difficult – in order to build a strong and healthy brain. Children need to experience risk, to make decisions, to try and to fail, sometimes over and over again, in order to form vital connections in their brain, connections that will impact on them for life.

Parents are, obviously, the main influence on how a child develops – we know that parents are children's first teachers, and the people who have been with the child from birth. It is important that we, as educators, support parents in their journey. Parenting practices, such as reading to children, using rich language, and having warm and responsive interactions are all associated with greater brain development outcomes.

For some parents, an awareness of brain development and what they "should" be doing can be overwhelming – parents can feel afraid that they are damaging their child by not providing enough – or can feel pressured into needing to make every experience "optimal". It is important for educators to reinforce the message that brain development occurs when children are included in the everyday rhythms of life – that children are loved, talked to, played with, and well nourished.

Environments, experiences, relationships and genetics all play a role in who a child will become. By having an understanding of brain development, those who work with and care for children can provide experiences to allow children to learn, explore, play and grow. ■

Further Resources

To access more resources around brain development in the IPSP online library (**www.ipsplibrary.net.au**), search for terms such as "brain", "developmental" or "child development". For ideas on setting up experiences and environments to support learning, you could search for "play based learning" or "environments", and for information on working with families, try searching "families" or "parent".

Read more about brain development from:

Zero to Three National Centre for Infants, Toddlers and Families:
http://www.zerotothree.org/child-development/brain-development/baby-brain-map.html

The Center on the Developing Child – Harvard University:
http://developingchild.harvard.edu/resources/briefs/inbrief_series/inbrief_the_science_of_ecd/

Or hear from Dr Bruce Perry, child psychiatrist, on improving outcomes for at risk young people:
https://www.youtube.com/watch?v=DXdBFFph2QQ

If you would like further support, please email the project officer, at **enquiries@gowriesa.org.au**

References:

Shonkoff, J 2000, From Neurons to Neighbourhoods: The science of Early Childhood Development, National Academies Press, Washington, DC

Department of Education and Children's Services 2010, Engaging families in the early childhood development story: Neuroscience and early childhood development: summary of selected literature and key messages for parenting, DECD, South Australia

Brookes, F, Green, J & Hopkins, L 2013, 'Books, bytes and brains: The implications of new knowledge for children's early literacy learning', Australian Journal of Early Childhood, vol. 38, no. 1.