

The first year of life

A new-born baby can see, hear and feel. By the age of five, a child can talk and ride a bike. How does this development happen? We don't really understand the way language and thinking develop in the brain. Now scientists are using new technology to help them in their studies. They are discovering new information about the way a baby's brain develops.

A study in 2010 showed that the experiences a child has in their first few years are important. These experiences affect the development of the brain. The study showed when children receive more attention, they often have higher IQs. Babies receive information when they see, hear and feel things. This information makes connections between different parts of the brain. There are a hundred trillion connections in the brain of a three-year-old child.

One experiment studied how new-born babies' brains react to different sounds. The sounds were in different patterns. For example, the sounds mu-ba-ba make the pattern 'A-B-B'. And the sounds mu-ba-ge make the pattern 'A-B-C'. The results of the study showed that babies know the two patterns are different. Patterns are important in language. The order of words is important to grammar and meaning. For example, 'John killed the bear' doesn't mean the same as 'The bear killed John.' Both sentences have the same words, but they are in a different order. The experiment shows that babies start to learn grammar rules from the beginning of their life.

Language is important for child development. Babies can hear language in various ways: listening to television, audio books or the Internet and interacting with people. A scientist, Patricia Kuhl, compared two groups of nine-month-old American babies. Both groups heard Mandarin Chinese sounds. The first group watched videos. In the second group, people spoke the same sounds to the babies. Then they tested the babies. The second group recognised the different sounds. The first group learned nothing. Patricia Kuhl said this result was very surprising. It shows that social interaction is important to successful brain development in babies.

Glossary

IQ (n) 'intelligence quotient', level of intelligence; **speech** (n) the ability to speak

KEYWORDS

feel (v) to notice something that is near you or is happening to you

hear (v) to be aware of a sound in your ears

listen (v) to give something your attention using your ears

ride (v) to travel on a bicycle, horse or motorbike

see (v) to notice things with your eyes

sound (n) something that you can hear

speak (v) to say something using your voice or to be able to communicate in a particular language

talk (v) to say something to someone

understand (v) to know the meaning of something such as words or ideas

watch (v) to look at something and give your attention to it