All about ...
screen time

What are the dangers of children having too much screen time – and are there any benefits, asks *Annette Rawstrone*, with advice for practitioners and parents

How often do you find yourself checking your phone and then realise that you have started aimlessly scrolling through social media posts without really intending to? If adults find screens captivating and addictive then we can't blame children for being drawn to them too, especially when there is flashing imagery and catchy music. But is there any harm in children spending time on screens?

Unfortunately there is currently very little recent research into whether screen time – the amount of time spent using a device with a screen, such as a smartphone, computer, television or video game console – is detrimental to children's health and development because much of the evidence of 'toxic screen time' is based solely on television viewing.

A recent Ofcom survey (2022) revealed one in five three- and four-year-olds in the UK have their own mobile phone. While these figures give a picture of the extent of phone ownership, they do not account for the number of children using parents' phones and other devices – think how often you see children being pushed in prams staring at phones or being entertained by tablets in restaurants and shops.

In the absence of research, the House of Commons cross-party Education Committee is currently investigating how screen time impacts on education and wellbeing. It is questioning how schools and parents can be better supported to manage children's screen usage and whether the Department for Education could be doing more.

Dr Sanjiv Nichani, a consultant paediatrician at Leicester Children's Hospital, was so concerned by the numbers of non-verbal two- and three-year-olds he was seeing in his clinic – and teenagers presenting with headaches, sleep problems, anxiety and psychosomatic symptoms – that he undertook his own research into international findings around screen time.

'The more I read, the more I was alarmed,' he says. 'I read studies showing that children who spend too much time on social media have brain changes on MRI scans, which is shocking.'

Also, the most senior doctor in the US issued a public health advisory in May 2023 saying that evidence of the impact of screen use was very serious. 'I feel we don't have the luxury of time to wait decades for hundreds of studies on thousands of children to confirm that too much screen time is very detrimental,' he said.

Nichani warns of an impending 'screendemic' – a pandemic of mental health illnesses based on too much screen time – and is aiming to educate parents, teachers and early years practitioners on the dangers by producing digestible information and advice (see 'Advice for parents'). In recognition of the emerging evidence, he says that nurseries in Sweden are being advised to limit screen time, and Denmark is legislating against the use of screen time in nurseries apart from for extenuating circumstances.

Baroness Beeban Kidron, founder and chair at 5Rights Foundation, which advocates for children's rights in a digital world, presented evidence to the Education Committee and is urging the early years sector to call for all parties to have a comprehensive tech policy that protects children. She wants there to be data protection in educational technology, certification of educational apps, and government procurement support in setting standards.

'[We need] more support for schools and early years settings from governments to invest in tech literacy, not e-safety, so that teachers and educational practitioners see tech as a useful tool and tech in schools is configured to support child development, rather than build the data-hungry advertising model as is the case now,' says Kidron.
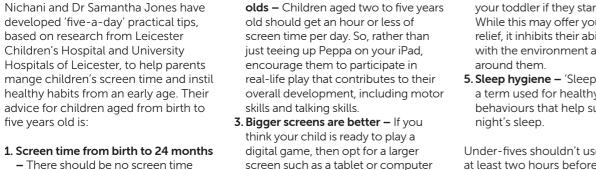
Nichani cautions against apps that are run on algorithms which are designed to be addictive. This is an issue that has received attention in the US, with attorney-generals from across the country suing Meta, the parent company of Facebook and Instagram, alleging the firm is deliberately designing products to appeal to children to the detriment of their mental health. 'Children are particularly vulnerable, as their brains are developing and they are less likely to realise that they are getting addicted, nor indeed the implications,' he warns.

Rather than what screen time actually does to a child, Kidron believes the biggest risk is what children are missing out on while they are watching screens. 'So if for early years you think about the most important events and experiences for a child – walking, running, playing, responding, fine motor skills associated with drawing or doing physical puzzles and games, emotional development as they build understanding of others in the room, the relationships, their behaviours and the signals, visual, audio and movement, that they send; all of these things are not available on screen, and so for the most part, screen time is in the way of very important development opportunities,' she explains.

Kidron adds that professionals are increasingly seeing children who can't play with others, don't have fine motor skills, fail at simple physical tasks, don't make eye contact and have less vocabulary when they start school. 'Some of these are directly related to being strapped in with a device, others are because they have not had enough interactions of other kinds to balance all their development needs,' she says. 'There is a growing body of longitudinal evidence about emotional development also, with children who have had a lot of screen time before two showing excessive levels of frustration, anger and impatience by the age of six.'

DANGERS OF SCREEN TIME

A young child's developing brain benefits far more from unstructured play and exploration than time spent on electronic gadgets. They need to have plenty of opportunity to interact with three-dimensional spaces and activities and to use all their senses, which they can't do with two-dimensional images on a screen.

Although children are captivated by moving images on screens from a very young age, studies show that they do not start to understand the actual content until they are older than two. They learn much more from direct interactions with people than they will from staring at a screen, and excessive screen use can also be detrimental in other ways.

For under-fives, studies demonstrate that spending significant amounts of time on a screen is associated with:
- poor performance on screening measures that assess children's achievement of milestones
- developmental delays in communication, including children being non-verbal, and difficulty with problem-solving
- sensory processing issues
- obesity, with more time spent in sedentary activities leading to children being overweight.

BENEFITS OF SCREEN TIME

Not all screen time is negative and there are many educational opportunities to be gained from it in early years settings. 'The use of screens like tablets can have a positive impact when the practitioner plans use around a specific objective,' says early years leader and Apple Distinguished Educator Marc Faulder. 'If the software can engage a child in their next steps and see progress in learning, such as playing a numbers game or a child with sensory needs making artwork on screen,' then the impact on development is good.'

Kidron adds how technology can transport us in time and space: 'It has a number of great possibilities – visiting places you can't get to, remote contact with people who are not there, sharing experiences across multiple boundaries.' She uses examples such as reaching out to children in other countries to find out about ➤

Advice on appropriate screen time is different for each age group

advice for parents

Consultant paediatricians Dr Sanjiv Nichani and Dr Samantha Jones have developed 'five-a-day' practical tips, based on research from Leicester Children's Hospital and University Hospitals of Leicester, to help parents mange children's screen time and instil healthy habits from an early age. Their advice for children aged from birth to five years old is:

1. **Screen time from birth to 24 months –** There should be no screen time for children until they are 18 to 24 months, except for video chatting.Try to keep your phone out of sight when you're not FaceTiming with Granny.

2. **Screen time for two- to five-year-olds –** Children aged two to five years old should get an hour or less of screen time per day. So, rather than just teeing up Peppa on your iPad, encourage them to participate in real-life play that contributes to their overall development, including motor skills and talking skills.

3. **Bigger screens are better –** If you think your child is ready to play a digital game, then opt for a larger screen such as a tablet or computer screen, as these cause less visual stress than a phone.

4. **Avoid using a digital device to settle your child –** Try to resist the temptation to hand your phone to your toddler if they start to fuss. While this may offer you short-term relief, it inhibits their ability to interact with the environment and people around them.

5. **Sleep hygiene –** 'Sleep hygiene' is a term used for healthy habits and behaviours that help support a good night's sleep.

Under-fives shouldn't use a screen at least two hours before bedtime, to aid their natural sleep pattern. Build a calming bedtime routine that involves snuggling up for stories, rather than sitting in front of the TV.

their lives or watching a space launch and then investigating space travel.

HOW MUCH SCREEN TIME?

It is difficult to quantify how much screen time is too much. 'Screen time is an unhelpful term, because it spans talking to granny on Skype or FaceTime just as it might be watching inappropriate videos on a loop, or highly demanding interactions with many buzzes, flashes, loud noises in an app for very young children. So we tend to think about what, why and who with, rather than how long,' explains Kidron.

'Having said that, there is a growing body of evidence that apart from [using screens for] family contact, no screen time is the perfect amount for under two years old, and that for those aged three to five, it should be largely done in conjunction with an adult and be guided towards products and services that are low-energy and build on the knowledge and experience of the child, rather than high-energy and there to distract.'

Faulder agrees that young children should use screens with the support of an adult. He says it is the adult's role to say when the activity should come to an end, either when concentration is lapsing or when the objective for the activity has been met.

ADVICE FOR PRACTITIONERS

'As a teacher, I would introduce screens – tablets and computers – to children at an age when they can understand the purpose of the age-appropriate software on the screen. Question are they learning from it, engaging with it or creating using it, as opposed to watching it or tapping without purpose,' advises Faulder. 'Go back to the Characteristics of Effective Learning in *Development Matters*. Select software which meets these statements and plan digital activities with a specific next step in mind.'

Kidron cautions that even if you are using screens productively in a nursery setting, it may add to life with 'an abundance of screen time and too little play', so practitioners should consider how much access to screens children are already having at home.

Not all screen use is bad, depending on factors such as purpose and time spent

She also warns against using educational programmes aimed at young children that have advertising content or provide high stimulus reward loops for clicking and watching. 'Remember what good education is – a virtuous loop of experience, explanation, discussion, reinforcement, all building on the lived experience of the child. If you use tech to play a part in that – great,' says Kidron. 'But ticking boxes or gamifying maths does not in and of itself offer that important set of experiences. The US-based Kids on Screens says it best: "There is no evidence that tech does anything better than a teacher in a classroom who knows their class and is trained to teach the subject".'

case study: ELY Nursery in Finchley, North London

'Working in the early years, we understand the impact of children's early experiences on their brain development, but I was concerned to read about the detrimental effect that excessive screen usage can have on the mental health of young children. There is also evidence of structural change in their developing brains leading to lower cognitive function, reduced attention span and impaired memory,' says head of operations Mya Sharma.

'While we believe it is important for children to have access to technology and understand how to use it, we are conscious of keeping screen use to a minimum during the nursery day. We want pre-school children to develop IT skills, but we make sure it's part of their active learning, rather than passive screen viewing. For example, we will use technology to extend their learning around their favourite children's books, to research their interests and to watch short education videos.

'We are transparent to parents around what we will and won't use screen time for and share information with them around how detrimental it can be if not controlled. It is almost impossible to disconnect from screens in today's society, but we can model to young children how to use them responsibly.'