Bedtime use of media devices more than doubles the risk of poor sleep in children

31 October 2016

Credit: Petr Kratochvil/public domain

Children using devices such as smartphones and tablets at bedtime have over double the risk of a disrupted night's sleep compared to children without access to such devices, according to a new study led by researchers from King's College London.

Previous research suggests that 72 per cent of children and 89 per cent of adolescents have at least one device in their bedrooms and most are used near bedtime. The speed at which these devices have developed - and their growing popularity among families - has outpaced research in this area, meaning that the impact on sleep is not well understood.

This new research, published today in *JAMA Pediatrics*, is a review of 20 existing studies from four continents, involving more than 125,000 children aged 6-19 (with an average age of 15).

The researchers from King's found that bedtime use of media devices was associated with an increased likelihood of inadequate sleep quantity, poor sleep quality, and excessive daytime sleepiness. Bedtime use was classified as engagement with a device within 90 minutes of going to sleep.

They also found that the presence of a media device in the bedroom, even without use, was associated with an increased likelihood of poor sleep. One potential reason for this is that the 'always on' nature of social media and instant messaging means children are continuously engaged with devices in their environment, even when they are not actively using them.

It is thought that screen-based media devices adversely affect sleep through a variety of ways, including delaying or interrupting sleep time; psychologically stimulating the brain; and affecting sleep cycles, physiology and alertness.

Sleep disturbance in childhood is known to have adverse effects on health, including poor diet, obesity, sedative behaviour, reduced immune function and stunted growth, as well as links with mental health issues.

Dr Ben Carter from King's College London, said: 'Our study provides further proof of the detrimental effect of media devices on both sleep duration and quality.

'Sleep is an often undervalued but important part of children's development, with a regular lack of sleep causing a variety of health problems. With the ever growing popularity of portable media devices and their use in schools as a replacement for textbooks, the problem of poor sleep amongst children is likely to get worse. Our findings suggest that an integrated approach involving parents, teachers, and healthcare professionals is necessary to reduce access to these devices and encourage good sleeping habits near bedtime.'

More information: *JAMA Pediatr*. Published online October 31, 2016. DOI:

10.1001/jamapediatrics.2016.2341