



LESS PHYSICAL ACTIVITY, MORE SCREEN TIME – DOES IT MATTER?

By Trina Hinkley, a research fellow at the Centre for Physical Activity and Nutrition Research, Faculty of Health, Deakin University

Trina shares with us the latest research which highlights the importance of increasing physical activity and decreasing screen-time for positive outcomes in young children's health and well-being.

As parents, we want to do the best we can for our children. Similarly, as educators, we want to provide the children in our care with the best opportunities for a healthy start to life and smooth transition to school. When we think about our children's health, we tend to worry more about coughs and colds than longer term issues, and many of us believe that our children's behaviours are unlikely to impact their health or development at

an early age. For instance, we think that our children are naturally physically active – mostly all we need to do is open the door for them and they'll run around and have as much activity as they need. When it comes to screen time – using devices such as TV, iPads and computers – we believe they offer valuable benefits such as quiet time, time out for busy parents, and are beneficial to children's education. Certainly, promoters of 'educational' games and programs suggest that this is the case.

However, evidence now suggests that young children typically participate in less physical activity, and more screen time, than Australian and international health

guidelines recommend (Hinkley, Salmon, Okely, Crawford & Hesketh, 2012).

Australian guidelines recommend that children five years and younger participate in at least three hours of physical activity every day. Children aged birth through two years are recommended to take part in no screen time at all, and children aged two through five years should use no more than one hour of screen time each day (Department of Health, 2014).

But what does it really matter if your child, or the children in your care, don't meet these guidelines? As it turns out, it matters a lot. Higher levels of physical activity during early childhood are beneficial for maintaining a healthy weight, developing motor skills such as jumping, kicking and catching, well-being, cognitive development, bone health and heart health (Timmons et al., 2012). Lower levels of screen time are beneficial for maintaining a healthy weight, well-being and cognitive development (Leblanc et al., 2012).

Many of us will be familiar with the concepts of things like maintaining a healthy weight, bone health and heart health. The impact of physical activity and screen time on children's well-being and cognitive development may be less well understood, and it's these outcomes we'll explore further here.

Well-being incorporates children's psychological and social health. It is considered to be the presence of higher levels of positive, and lower levels of adverse, psychological and social attributes and behaviours. These may include things like children's social skills, self-regulation, and physical aggression, anxiety, and attention problems. Therefore, children who have higher levels of social skills and better self-regulation, and lower levels of aggression, anxiety and attention problems, would be considered to have more favourable well-being overall. Children's physical activity and screen time may play a role here. For instance, children who have higher levels of physical activity have been shown to have lower levels of conduct problems,

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peer problems, and emotional symptoms, and more favourable levels of emotional competence. Children who have lower levels of screen time, particularly television viewing, tend to have lower levels of aggression, hyperactivity, are victimized less frequently and are less likely to be a bully. Lower levels of screen time are also associated with better self-control and more positive classroom engagement (Hinkley, Teychenne, Downing, Ball, Salmon & Hesketh, 2014).

Optimal cognitive development during early childhood includes the development of cognitive abilities in a number of areas. These include language, memory, and executive function which is the ability to regulate thoughts, actions, and emotions. Emerging evidence is showing that physical activity and screen time can impact children’s cognitive development. Increased physical activity during early childhood has been shown to be beneficial to a number of aspects of cognitive development including language, executive function, flexibility of ideas, self-regulation (the ability to control our emotions and regulate our behaviour) and sustained attention. Children who

spend less time in screen time tend to have better language development (more words and better word understanding) and understanding of numbers. Children who watched violent shows or cartoons tended to do even more poorly in these areas. Of note also, children who spend more time reading, or being read to, tend to have stronger language development (Carson et al., in press-a; Carson et al., in press-b).

While the body of evidence investigating these aspects of children’s behaviours and development is still small, the emerging evidence is fairly clear: physical activity is beneficial for children and screen time can be detrimental. So, what can you do to support healthy outcomes in your children?

For parents, a great tool to work out how much time we spend doing just about anything is monitoring. This involves keeping a really careful record of how much time your child spends being active and using screens. A simple diary on the fridge works well. Pop your child’s name down one side and mark times of the day across the top. You might like to have one each for physical activity and screen time, or include them both on the one. Simply

mark off the times your child was being active (time outside can be easy to keep track of) or using screen time. After a few days, add up the times. You might find this surprising! Parents often find their child is doing much less activity and much more screen time than they thought. Once you know how much time your child spends in each behaviour, and at what times of the day, it’s easier to have an idea of how that might be better managed. Repeating this process of monitoring from time to time helps to keep things on track.

Some of the things we know support physical activity during early childhood include being a boy (so girls might need extra support), time outside, and parents or other adults being active with children. Finding activities that you and your children enjoy will help to make active time more fun – and this is what it should be about! Spend more time outside – explore your neighbourhood on an adventure walk – how many different types of flowers or seed pods can you find? How many trees can your child count between corners? How many different colours are letterboxes painted? Touch, feel and talk about these things as you

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“Educators can support children being active by allowing plenty of time outside – an average of 15 minutes per hour is a great start. Ensuring there is plenty of equipment for children to use is helpful and providing instruction in fundamental movement skills such as jumping, catching and kicking (there are lots of programs available) have been shown to be really beneficial.”

find them to help your child's language development also. Invite a friend along to help your child practice their social skills. The times your child might usually watch TV can be replaced with blocks, reading or looking at books, craft activities, cooking and helping around the house – children are amazing helpers when chores are turned into a fun game. Educators can support children being active by allowing plenty of time outside – an average of 15 minutes per hour is a great start. Ensuring there is plenty of equipment for children to use is helpful and providing instruction in fundamental movement skills such as jumping, catching and kicking (there are lots of programs available) have been shown to be really beneficial. Here's a

great resource for parents and educators alike to help with ideas for fundamental movement skills and physical activity: <http://www.curriculumsupport.education.nsw.gov.au/primary/pdhpe/gamesport/fms001.htm>

Carson V, Hunter S, Kuzik N, Wiebe SA, Spence JC, Friedman A, *et al.* (in press-a). Systematic review of physical activity and cognitive development in early childhood. *J Sci Med Sport*.

Carson V, Kuzik N, Hunter S, Wiebe SA, Spence JC, Friedman A, *et al.* (in press-b). Systematic Review of Sedentary Behavior and Cognitive Development in Early Childhood. *Prev Med*.

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Hinkley T, Salmon J, Okely AD, Crawford D, & Hesketh K (2012). Preschoolers' physical activity, screen time, and compliance with recommendations. *Med Sci Sports Exerc* 44: 458–465.

Hinkley T, Teychenne M, Downing KL, Ball K, Salmon J, & Hesketh KD (2014). Early childhood physical activity, sedentary behaviors and psychosocial well-being: a systematic review. *Prev Med* 62: 182–192.

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Timmons BW, Leblanc AG, Carson V, Connor Gorber S, Dillman C, Janssen I, *et al.* (2012). Systematic review of physical activity and health in the early years (aged 0–4 years). *Appl Physiol Nutr Metab* 37: 773–792.

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