

Are children who walk and talk early geniuses in the making?

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Future tennis champion? 'He walked at eight months, ran at ten months and could catch a ball by the age of one.' Credit: leungchopan

From rolling over to walking and saying words, most parents will



remember the exact age at which their child achieved a certain "milestone". They will often also compare these early "rites of passage" to the progress of a sibling, cousin or friend, or to charts in the myriad parenting books setting out the ages at which children should develop certain skills.

For some parents this will provide reassurance about their child's start in life. For others it will be a source of anxiety. But do milestones really say anything about a child's potential? For example, is an early talker more likely to be academically gifted than others? Let's take a look at the evidence.

Checking the charts

Research on developmental disorders suggests that the age at which infants hit motor or language milestones can be a "marker" of later outcome. In particular, studies have found links between <u>early motor</u> <u>abilities and later language skill</u> and social cognition in <u>children</u> with, and at-risk of, an autism spectrum disorder. Similarly, children with developmental coordination disorder, which affects movement and coordination, can be distinguished by delays in early motor skill development. Children with language disorders too can be identified by their early language skills.

In this sense, milestones have some value for identifying young children that may require follow-up care. However, whether they can say anything about the future potential of children who are developing typically is less well known.

What we do know is that new skills grow from the acquisition of foundation skills. Crawling enables a child to move independently to objects that they would like to explore, and adults <u>increase the type of social signals</u> they offer the crawling child. Walkers, with their new



vantage point on the world, are typically more socially interactive and better at sharing objects. Therefore, it may be expected that those children that reach motor milestones at an early age will benefit from more opportunities to learn and refine new skills in the long run.

A study using a British cohort <u>looked at the relationship</u> between early development and cognitive skills at the age of eight. Cognitive ability was determined largely by literacy-type assessments, like reading comprehension and vocabulary, and a single measure of non-verbal IQ. While motor and language milestones were identified retrospectively by parents, meaning the accuracy may be questionable, the findings do suggest a tentative link between early and later development.

However, when "late bloomers" in motor development were excluded from the sample the mentioned effect was significantly reduced. In the remaining sample of "typical" achievers, only the measure of early speech development was associated with later cognitive skills, and the remaining relationship was significantly weaker.

When it comes to future potential for <u>motor skills</u>, however, there is <u>no</u> <u>conclusive evidence</u> that children who hit motor milestones early are, on average, more likely to have better motor skills than others later in life.

Nevertheless, motor skills may have an indirect effect on cognitive and later motor skills through the opportunities it gives a child to engage in and learn about the world.

When are first steps or words too late?

One thing to note when recording milestones is that children achieve basic motor milestones at a significantly different rate, <u>as reported</u> in a cross-cultural study by the World Health Organisation. Children can begin to walk unaided any time between eight and 18 months, and still



be classified within the "typical" range. In reality, rather little can be done to accelerate the time at which a child first turns over or crawls, other than providing the infant with adequate stimulation in their environment.

While parents may be concerned if their child is a "late bloomer", typically-progressing children fortunately are able to catch up. Research has demonstrated that the majority of late talkers <u>resolve their language</u> <u>difficulties</u> by school age. Also, <u>more thorough assessments</u> of infant vocabulary – at 18-20 months – rather than just first words have questioned the strength of the link between early talking and <u>cognitive</u> <u>skills</u>. So while there may be a relationship there, these studies have shown it is not a strong predictor for later language abilities. Of course, a very small proportion of late talkers may go on to develop language problems but a family history of language problems are a more reliable predictor of persistent difficulties.

It is inevitable that parents will compare their child's development to the norms or others, but the use of these as a window into the future remains unclear. To fully establish the role of early milestones, we would benefit from studying a large cohort of children prospectively from birth, identifying their milestones in early development and their relationship to later educational, behavioural and social outcomes.

Our current knowledge might not provide all parents with the direct reassurances that they crave. But further studies would allow more targeted guidance, support, and intervention for those children that would most benefit from immediate help that will have a lasting effect throughout their lives.

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