Childhood IQ Links to Adulthood IQ

A Special Report on researchers of the Consortium of Health Orientated Research in Transitioning Societies (COHORTS)

DSI-NRF Centre of Excellence in Human Development in partnership with the Department of Science and Innovation and the National Research Foundation held a briefing session on Tuesday, 4 November 2019 for researchers of the Consortium of Health Orientated Research in Transitioning Societies (COHORTS) and policymakers from various national government departments to present recent findings from the five country longitudinal health research studies.

South Africa, Brazil, Guatemala, India, and Philippines have followed select populations over a period of time, measuring the impact of social transitions and life experiences. These countries experience high rates of maternal and child undernutrition and have experienced accelerated social and economic transitions. According to initial findings presented, the studies revealed that a child’s cognitive ability is the highest predictor of adult IQ. It was previously thought that stunting in childhood (low height relative to weight ratio, prevalent in poorer contexts) was the main predictor of adult IQ.

The studies further highlight that school completion is critical for increased intellectual ability, and can buffer the effects of early childhood poverty, such as undernutrition. In other words, these studies show that even if children were stunted, completing school was linked to higher IQ scores as adults. Critically, stunting was not linked to adult IQ.

"The child development community has used child undernutrition, and specifically stunting, as a global indicator of child development," said Professor Aryeh Stein, principal investigator of the current wave of the COHORTS study, based at Emory University in Atlanta, USA. "In this multi-country longitudinal study, we show that child growth is poorly associated with adult IQ. Factors that are much more strongly associated with adult IQ include child IQ measured at the time of school entry and the wealth of the birth household. We also show that schooling is linked to higher IQ, and can, to some extent, mitigate the differences in adult IQ that are related to child preschool IQ.

We conclude that early child development, and ensuring that all children, and in particular those from poorer households, stay in school, are the keys to ensuring that these children maximise their intellectual potential."

Professor Shane Norris, director of the DSI-NRF Centre of Excellence in Human Development, explained, "We can’t assume that IQ is innate and fixed, and indeed that social and structural contexts must support children to complete school. These findings suggest that poverty shapes intelligence, often with intergenerational repercussions."

History of the collaboration

This COHORTS collaboration is the first of its kind in the global South and has developed through a number of phases:

- 2005-2006: Preparation and publication of the original Lancet article.
- 2007-2016: Development of analytic approaches and manuscripts to address questions of the role of early and later life linear growth and weight gain on adult human capital, the role of factors such as maternal age and parity, and breast feeding in this relationship.
- 2017: Present; addressing the roles of the early social and physical environment on adult human capacity.

The collaboration has, to date, published 18 peer-reviewed articles in leading journals. The core COHORTS database is central to the explorations of the longitudinal patterns of growth and cognitive development, being the only set of data that extends from birth through to adulthood in low and middle-income contexts.