



Pupils of the Sinthiou Mogo school having their lunch in Senegal

WFP/Paulele Fall

Taller but thinner: trends in child anthropometry in Senegal 1990–2015

Research snapshot¹

This article investigates trends in child anthropometry in Senegal between 1990 and 2015, associating them with potential causes; i.e., changes in health status, income, diet and socio-economic status. The author analysed data on height, weight, body mass index (BMI) and associated z-scores: height-for-age (HAZ), weight-for-age (WAZ) and weight-for-height (WHZ) from nine nationally representative Demographic and Health Surveys (DHS) samples of Senegalese children aged 12 to 59

months. Over a 25-year period, the average height of children increased by +1.88 cm and their average weight increased by +0.10 kg, but their BMI decreased by -0.53 kg/m². Corresponding changes expressed in z-scores were +0.454 in HAZ, +0.109 in WAZ and -0.302 in WHZ. This pattern of decreasing stunting while increasing wasting was correlated with decreasing child mortality, despite small changes in income per capita and in adult heights or BMI. The largest improvements in HAZ were among the lower socio-economic strata, while largest declines in WHZ were more pronounced among the highest socio-economic strata (urban population, more educated mothers and wealthier families). When compared to the Centers for Disease Control and Prevention (CDC) reference dataset (2000) for the eight surveys, the mean anthropometry of Senegalese children was lower: -2.0 kg lower weight, -3.3 cm lower height and -1.2 kg/m² lower BMI. Comparison with DHS data from other Sahelian countries shows that children also grew taller and heavier over the same cohorts, but BMI tended to increase in Mali and in Niger, stayed about the same in Burkina-Faso and decreased only in Chad (but much less than in Senegal).

With the health transition, economic development and improving diet, the heights of children under five years of age tend to increase over time. Changes in child anthropometry in Senegal over the past 25 years therefore appeared atypical: children grew taller but became thinner over time. To explain these changes in child anthropometry, the author hypothesises that children's heights increased mainly because of a better control of infectious diseases, while BMI did not follow because increases in income and food intake were not enough to compensate for rising heights.

¹ Michel Garenne. Taller but thinner: trends in child anthropometry in Senegal, 1990–2015. *Public Health Nutr.* 2020 Jan 3;1-8. doi:10.1017/S1368980019003598

Prevention of child wasting: Results of a Child Health & Nutrition Research Initiative (CHNRI) prioritisation exercise

Research snapshot¹

An estimated 49.5 million children under five years of age are wasted. The decline in the global prevalence of wasting has been slow, from 7.9% in 2012 to 7.3% in 2018; just 37 (19%) out of 194 countries are on track to achieve the World Health Assembly (WHA) 2025 target of maintaining prevalence of wasting below 5.0%. There is a lack of robust studies on effective interventions to prevent wasting. To address this, a research prioritisation exercise was undertaken to identify and prioritise the main outstanding research questions in relation to wasting prevention to inform future research agendas. The authors followed the Child Health and Nutrition Research (CHNRI) method. Identified research gaps were compiled from multiple sources, categorised into themes and streamlined into forty research questions by an expert group. A survey was then widely circulated to assess research questions according to four criteria and an overall research priority score was subsequently calculated for each question in order to provide a ranking order.

In total, 146 individuals participated in the survey from a wide range of geographical and

organisational background. Research questions prioritised by this group had a strong focus on interventions. The importance of the early stages of life in determining later experiences of wasting was highlighted. Other important themes included the identification of at-risk infants and young children early in the progression of wasting and the roles of existing interventions and the health system in prevention. These results indicate consensus to support more research on the pathways to wasting encompassing the in-utero environment, on the early period of infancy and on the process of wasting and its early identification. They also reinforce how little is known about impactful interventions for the prevention of wasting. This exercise provides a five-year investment case for research that could most effectively improve on-the-ground programmes to prevent child wasting and inform supportive policy change.

¹ Frison S, Angood C, Khara T, Bahwere P, Black RE, Briend A, et al. (2020) Prevention of child wasting: Results of a Child Health & Nutrition Research Initiative (CHNRI) prioritisation exercise. *PLoS ONE* 15(2): e0228151. <https://doi.org/10.1371/journal.pone.0228151>

WFP/Paulele Fall



Monitoring assistants conduct health assessments on nursing mothers and children for entry into the supplementary feeding programme in Mindanao, Philippines