

Stunting among children under 3 years of age in Côte d'Ivoire: spatial and temporal variations between 1994 and 2011

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Abstract

Objective: To investigate spatial heterogeneity of stunting prevalence among children in Côte d'Ivoire and examine changes in stunting between 1994 and 2011, to assess the impact of the 2002–2011 civil war that led to temporary partitioning of the country.

Design: Data from 1994, 1998 and 2011 Côte d'Ivoire Demographic and Health Surveys (DHS) were analysed using a geostatistical approach taking into account spatial autocorrelation. Stunting data were interpolated using ordinary kriging; spatial clusters with high and low stunting prevalence were identified using Kulldorff spatial scan statistics. Multilevel multivariable logistic regression was then carried out, with year of survey as the main independent variable and an interaction term for time by geographic zone (Abidjan, South, North).

Setting: Côte d'Ivoire, West Africa.

Subjects: Children aged 0–35 months included in three DHS (*n* 6709).

Results: Overall stunting prevalence was 30.7, 28.7 and 27.8% in 1994, 1998 and 2011, respectively ($P=0.32$). Clusters with high prevalence were found in 1994 (in the West region, $P<0.001$) and 1998 (in the West and North-West regions, $P<0.01$ and $P=0.01$, respectively), but not in 2011. Abidjan was included in a cluster with low prevalence in all surveys ($P<0.05$). Risk of stunting did not change between 1994 and 2011 at national level (adjusted OR; 95% CI: 1.39; 0.72, 2.64), but decreased in the South (0.74; 0.58, 0.94) and increased from 1998 to 2011 in Abidjan (1.96; 1.06, 3.64).

Conclusions: In Côte d'Ivoire, significant changes in stunting prevalence were observed at the sub-national level between 1994 and 2011.

Keywords
Africa
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