



# Malnutrition's Shadow on Cognitive Maturity in Early Childhood: A Botswagana Perspective

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## Abstract

Malnutrition is a pervasive issue in early childhood development across Africa, with significant implications for cognitive maturity. The review synthesizes data from various longitudinal and cross-sectional studies conducted since the early 2010s, employing a range of standardised assessment tools for measuring nutritional status and cognitive outcomes. Consistent findings across multiple studies indicate that undernutrition in early childhood is significantly associated with lower scores on standardised measures of verbal memory and problem-solving skills, though these effects vary by socioeconomic status and duration of malnutrition. The review underscores the need for targeted interventions to address malnutrition risks, particularly among vulnerable populations such as indigenous communities in Botswana. Policy recommendations include increased funding for nutrition programmes aimed at early childhood development, alongside community-based initiatives that promote breastfeeding and balanced diets.

**Keywords:** *Sub-Saharan, malnutrition, cognitive development, longitudinal study, developmental psychology, epigenetics, socio-economic disparities*

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