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# The Impact of Micronutrient Powder Provision on Anaemia Prevalence in Under-Five Children in Maradi, Niger: A 2002 Cohort Analysis

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## Abstract

Anaemia is a major public health issue in Niger, especially for young children. The Maradi region experiences high rates of malnutrition and food insecurity, leading to micronutrient deficiencies. While micronutrient powder (MNP) distribution programmes have been implemented, local evidence of their effectiveness is required. This study evaluated the effect of a routine MNP distribution programme on the prevalence of anaemia in children under five years of age in Maradi, Niger. A retrospective cohort analysis was performed using programme monitoring and health survey data. Haemoglobin levels were assessed in children from the target cohort who received MNPs for a standardised period and compared to a matched group from the same region with no MNP exposure. Anaemia was classified using World Health Organisation haemoglobin cut-offs. The prevalence of anaemia was significantly lower in the intervention group compared to the non-intervention group. Moderate anaemia was reduced by 18 percentage points among children who consistently consumed the MNPs. The provision of micronutrient powders was associated with a substantial reduction in anaemia prevalence in under-five children in this setting. Integrate MNP distribution into routine child health services in Maradi. Strengthen caregiver education on consistent MNP use and complement with strategies to address underlying causes of malnutrition. Further operational research is needed to optimise coverage and adherence. anaemia, micronutrient powders, child health, Niger, nutrition, public health programme This research provides evidence from a real-world programme setting in Niger, informing national and regional policy on nutrition interventions for children.

**Keywords:** *Micronutrient powders, Childhood anaemia, Sahel, Nutritional intervention, Cohort study, Haemoglobin concentration, Under-five children*

# ABSTRACT-ONLY PUBLICATION

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