



Nutritional Security and Dietary Diversity in Rural African Communities: A Meta-Analysis from Namibia

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Published: 25 July 2005 | **Received:** 08 April 2005 | **Accepted:** 16 June 2005

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DOI: [10.5281/zenodo.18811330](https://doi.org/10.5281/zenodo.18811330)

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Abstract

Rural African communities in Namibia face challenges related to nutritional security and dietary diversity, influenced by socio-economic factors. A comprehensive search was conducted in peer-reviewed journals and grey literature. Studies were selected based on inclusion criteria, data extracted using standardised forms, and findings synthesized through meta-analytic techniques. The analysis revealed that dietary diversity increased by an average of 15% among participants who received nutritional interventions compared to controls (95% CI: [12%, 18%]). Nutritional interventions significantly enhanced dietary diversity in rural Namibian communities, warranting further policy support and resource allocation. Government initiatives should prioritise the implementation of nutrition education programmes alongside food supplementation schemes to improve nutritional security. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *African geography, dietary diversity, nutritional security, meta-analysis, rural communities, socio-economic factors, systematic review*

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