



# Replication Study on Nutritional Security and Dietary Diversity in Rural Botswana Communities

Senga Sekgoba<sup>1</sup>, Mogae Molefi<sup>1,2</sup>

<sup>1</sup> Botswana International University of Science & Technology (BIUST)

<sup>2</sup> University of Botswana

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**Correspondence:** [ssekgoba@yahoo.com](mailto:ssekgoba@yahoo.com)

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## Author notes

*Senga Sekgoba is affiliated with Botswana International University of Science & Technology (BIUST) and focuses on Agriculture research in Africa.*

*Mogae Molefi is affiliated with University of Botswana and focuses on Agriculture research in Africa.*

## Abstract

Nutritional security refers to ensuring that all individuals have access to sufficient, safe, and nutritious food at all times. Participants were recruited through random sampling from four districts of Botswana. Dietary data was collected via a structured questionnaire with five-point Likert scale responses, and analysed using multivariate regression models to identify factors affecting nutrient intake levels. Data analysis revealed that community members consume an average of 75% of the recommended daily allowance for fruits and vegetables, indicating a significant gap in meeting nutritional guidelines. The replication study confirms previous findings regarding dietary diversity and its implications on nutritional security among rural Botswana communities. Increased public health education campaigns should be implemented to promote balanced diets rich in fruits and vegetables. The empirical specification follows  $Y = \beta_{0+\beta}^{-1} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** African, Nutritional Security, Dietary Diversity, Rural, Food Security, Anthropometry, Quantitative Analysis

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