Spatial Distribution of Determinants of Malnutrition of Children under Five Years in Rwanda: Simultaneous Measurement of Three Anthropometric Indices

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ABSTRACT The main objective of this paper was to identify the risk factors of malnutrition among children under five years in Rwanda and produce the maps of prevalence of joint distribution of stunting, underweight and wasting. Each of these anthropometric indicators is categorized as malnourished (z-score <-2.0) and nourished (z-score ≥-20). The spatial multivariate generalized linear mixed model is used to simultaneously identify the spatial distribution of risk factors of malnutrition of the children under five years. The 2010 Rwanda Demographic and Health Survey data was used in the analysis. The paper revealed that the age of child, birth order, gender of child, birth weight, fever, mother's education level, mother's age at the birth, body mass index, mother's knowledge on nutrition, anemia, province, source of drinking water, multiple birth, and wealth index have significant effects on malnutrition status of the children under five years of age in Rwanda.