## Primary Health Care Research & Development

cambridge.org/phc

### Research

Cite this article: Beitze DE, Kavira Malengera C, Barhwamire Kabesha T, Frank J, Scherbaum V. (2023) Disparities in health and nutrition between semi-urban and rural mothers and birth outcomes of their newborns in Bukavu, DR Congo: a baseline assessment. *Primary Health Care Research & Development* 24(e61): 1–18. doi: 10.1017/S1463423623000518

Received: 15 September 2022 Revised: 29 March 2023 Accepted: 28 August 2023

#### **Keywords:**

Antenatal care; birth weight; DR Congo; nutritional status; pregnancy

#### Corresponding author:

Damaris Elisabeth Beitze;

Email: damaris.beitze@uni-hohenheim.de

# Disparities in health and nutrition between semi-urban and rural mothers and birth outcomes of their newborns in Bukavu, DR Congo: a baseline assessment

Damaris Elisabeth Beitze<sup>1</sup>, Céline Kavira Malengera<sup>2,3,4</sup>,

Theophile Barhwamire Kabesha<sup>3,5</sup>, Jan Frank<sup>1,6</sup> and Veronika Scherbaum<sup>1</sup>

<sup>1</sup>Institute of Nutritional Sciences, University of Hohenheim, Stuttgart, Germany; <sup>2</sup>School of Public Health, Faculty of Medicine, Université de Goma, Goma, DR Congo; <sup>3</sup>School of Medicine and Public Health, Université Evangélique en Afrique, Bukavu, DR Congo; <sup>4</sup>Département de Nutrition, Centre de Recherche en Sciences Naturelles/Lwiro, D.S. Bukavu, DR Congo; <sup>5</sup>Faculty of Medicine, Official University of Bukavu, Bukavu, DR Congo and <sup>6</sup>Food Security Center, University of Hohenheim, Stuttgart, Germany

#### **Abstract**

Aim: This research aimed to evaluate health and nutritional practices of mothers during pregnancy and birth outcomes of their newborns in Bukayu, Democratic Republic of the Congo (DRC), comparing semi-urban and rural areas. Background: Health and nutrition during pregnancy are crucial for adequate development of the fetus. Health care plays an important role but is often poor in rural areas of developing countries. Methods: A baseline survey of a nutritional follow-up study was conducted in two semi-urban and one rural hospital in the vicinity of Bukavu, DRC. In total, 471 mother-child pairs were recruited after delivery. Data collection included socio-demographic parameters, nutrition and health measures during pregnancy, and anthropometric parameters. Semi-urban and rural study locations were compared and predictors of birth weight evaluated. Findings: Semi-urban and rural mothers differed significantly in nutrition and health practices during pregnancy, as well as birth outcomes. In the rural area, there was a higher rate of newborns with low birth weight (10.7%) and lower rates of antimalarial medication (80.8%), deworming (24.6%), consumption of nutritional supplements (81.5%), and being informed about nutrition by medical staff (32.8%) during pregnancy as well as practicing family planning (3.1%) than in the semi-urban areas (2.7%, 88.6%, 88.3%; 89.3%, 46.5%, and 17.1%, respectively). Birth weight was positively predicted by increasing maternal MUAC, age, and gestational age and negatively by rural location, being primipara, being a farmer, and female newborn sex. Conclusion: The findings highlight the importance of strengthening antenatal care activities especially in rural areas in order to ameliorate both maternal and infantile health and ensure appropriate development.