

Diet patterns in the context of climatic changes and Covid-19 among Indigenous and rural Ugandan communities

G. Scarpa^{1,2}, L. Berrang-Ford^{1,2,3}, M. Galazoula⁴, S. Twesigomwe³, P. Kakwangire³, E. Ninshaba³, C. Zavaleta-Cortijo⁵, S. Lwasa^{6,7}, D. Namanya⁸ and J.E. Cade²

¹School of Environment, University of Leeds, Leeds, UK,

²School of Food Science and Nutrition, University of Leeds, Leeds, UK,

³Indigenous Health Adaptation to Climate Change Research Team,

⁴Leeds Institute for Data Analytics, University of Leeds, Leeds, UK,

⁵Facultad de Salud Publica y Administracion, Universidad Peruana Cayetano Heredia, Peru,

⁶Department of Geography, Makerere University, Kampala, Uganda,

⁷The Global Center on Adaptation, Rotterdam, Netherlands and and

⁸Ministry of Health, Uganda

Climatic changes affect Indigenous and remote communities' food systems, increasing their vulnerability to nutrition insecurity⁽¹⁾. Covid-19 has the potential to exacerbate the effect of climate change and make Indigenous populations at higher risk of malnutrition by reducing food accessibility, increasing food costs and changing the local diet⁽²⁾. The objective of this study is to describe the diet patterns of Indigenous and non-Indigenous populations in Uganda over six months to explore the effect of seasonality and weather, and Covid-19 on nutrient intakes. We randomly selected 60 participants (20 mothers, fathers and children aged between 6 and 23 months) from two different communities (Indigenous Batwa and Bakiga) for this pilot study. A mixed-methods study with concurrent qualitative and quantitative data collection was undertaken. Monthly dietary intake data was collected from each participant from February to July 2021 through 24-hour recall surveys using a specially developed Ugandan food composition database⁽³⁾ included in the online tool myfood24.

Also, we collected: 1) demographic and Covid-19 related information through a survey; 2) data regarding perceptions of diet over the year, and during Covid-19 through a qualitative interview; 3) baseline anthropometric measurements. Most of the adults (n = 31, 77%) had a normal BMI, while 60% (n = 12) of children were malnourished; and 30% (n = 6) of Batwa children were stunted. Over six months, no adverse climatic events occurred, however rainy and dry seasons did not follow the typical pattern, and this was a challenge for growing crops, and ensuring household food security. A time series of the average energy intake/day in adults showed a drop in April (mean 1474kcal/d SD 676), and a rise in June (mean 1773kcal/d SD 772). In children energy intake was lower in February (mean 584kcal/d, SD 234) than during the rest of the time. Daily iron, vitamin A, zinc and iodine intake was generally lower than the reference nutrient intakes. Iron intake dropped from 14mg/d (SD 6) in March to 10mg/d (SD 5) in July among adults and was lower among the Batwa population. Overall, vitamin A intake was low in all seasons for adults and children. A change of diet from the beginning of the pandemic (March 2020) occurred in 58% (n = 23) of the interviewed adults, who reported to have eaten less (-130 kcal/d compared to the monthly average, CI -477, 214) and with a lower variety of foods due to higher costs and limited job opportunities during the Covid-19 period. These populations showed variation in intakes during the year. Understanding and reinforcing Indigenous food systems, to identify yearly dietary patterns in non-pandemic situations in the climate change context is required to improve populations' nutrition and health status.

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References

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