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## Factors associated with the seasonal variation of the nutritional status among mother in a rural setting in Madagascar

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The prevalence of under-nutrition among rural population in developing countries increases during the lean season. This study aims to identify the factors associated with the seasonal variation of the nutritional status amongst mothers in a rural setting in Madagascar. A cohort study was carried-out among 670 mothers aged 18-45 and living in the rural area of Amoron'i Mania Region of Madagascar. Inclusion in the study occurred during the post-harvest season (July-August 2015), and mothers were followed until the end of the next lean period (February 2016). The difference between the body mass index and the middle upper arm circumference for both seasons was calculated to assess the seasonal variation of the nutritional status in women. Linear regression was used to identify the factors that contribute to the seasonal variation. The mean (SE) difference of the body mass index between the two seasons was -0.44 (0.04) kg/m<sup>2</sup> and -7.17 (0.48) mm for the mid upper arm circumference. Factors associated with the variation in body mass index are: Low level of education [ $\beta$  (95% CI)=-0.54 (-0.91; -0.18), p=0.003] and increase in the number of children under-five [ $\beta$  (95% CI)=-0.20 (-0.29; 0.11), p<0.001]. For mid upper arm circumference, these factors are: Low level of education [ $\beta$  (95% CI)=-0.158 (-2.65; -0.52), p=0.004] and pregnancy [ $\beta$  (95% CI)=-6.17 (-9.36; -2.98), p<0.001]. Fight against maternal under-nutrition in the study area has to take into account the level education of women, the number of children under five and the pregnant women.

## **Biography**

Lantonirina Ravaoarisoa is pursuing Doctoral studies from the Public Health School of the Université Libre de Bruxelles, Belgium. She works at the Research and Expertise Department of the National Institute of Public and Community Health in Antananarivo, Madagascar. She is a Researcher and Teacher Assistant at the Faculty of Medicine of the Université of Antananarivo, Madagascar.

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