

## **An exploratory spatial analysis of geographical inequalities of birth intervals among young women in the Democratic Republic of Congo (DRC)**

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## **ABSTRACT**

The interval between births is associated with child survival in the developing world. Short birth intervals contribute to mortality risks extending beyond the first year of life, and the effect is apparent even after taking into account other potential determinants such as maternal ill health or access to health services, and allowing for the uneven quality of data available for use in multivariate analyses. Contraceptive use is anticipated to contribute to a reduction in the proportion of short birth intervals, but evidence for this at the population level is lacking in the DRC and especially among young people. Furthermore, while the impact on birth intervals of different modern contraceptive methods is unknown, the use of depotmedroxyprogesterone acetate (DMPA) for example has gained considerable popularity in sub-Saharan Africa. We aimed to investigate inequalities at the provincial level of the associations between the proportion of short birth intervals and use of modern contraception among young people in the DRC. The data required for this study are the Demographic and Health Survey (DHS) undertaken in the DRC in 2007 and permission to use and analyse these data has already been sought and granted by MEASURE DHS - an online repository of ready-to-use data for over 90 countries from over 260 surveys available on request. Logistic regression and Bayesian geo-additive models will be used and their results compared to explain inequalities and changes in the proportion of short birth intervals and contraceptive use in the DRC among youths at the provincial level. SPSS software package would be employed for descriptive and logistic regression analyses and spatial modelling will be undertaken by specialized software such as WINBUGS and BayesX. The findings will be able to inform policy and practice on sexual and reproductive health in the DRC and also contribute to recommendations to improve reproductive health among young people in the DRC.

**Key Words:** Contraceptive use, geo-additive models, DRC, child survival