ABSTRACT

Underweight prevalence continued to be major public health challenge worldwide, particularly in developing countries like Pakistan. This study focused on socio-economic and demographic aspects of underweight (weight-for-Age) prevalence among children under five year of age in Punjab. In this regard, several socioeconomic and demographic factors are considered from MICS-4 data set. Only those variables are picked as predictors, which are usually described in the nutritional studies of children. Covariates includes the age and sex of the children, age of mother, total number of children born to women, family wealth index quintile, source of drinking water, toilet facility, place of residence, parents education and occupation. All Categorical variables are effect coded. Children age and mother age (when children born) are assumed to be nonlinear, Geographical region is spatial effect while other variables are parametric in nature.

Since the response is binary and covariate consists of usual linear terms, nonlinear effects of continues covariates and geographic effects in additive form so we use geo-additive models (based on fully Bayesian approach) with binomial family under logit link. Statistical analysis is performed on Statistical package R using BayesX and R2BayesX Libraries.

Underweight status of children is found positively associated with number of children under five in household ,total number of children ever born to woman and mother age when children born. Whereas it negatively associated with place of residence parents education and family wealth index quintile.