



Modelling cortisol data in Brazilian children using Bayesian linear mixed-effects models

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We consider Bayesian inference in linear mixed-effect models for the fourth root of cortisol data. The main interest is comparing the cortisol measurements along time after waking up between the groups: children working in the street and children who do not work in the street. The motivating data comes from a Brazilian study. Two models are proposed to the data, one considering only the effect of time after waking up and another model by adding the group effect plus the interaction between time after waking up and group. Credible intervals indicate that there is no difference in the fourth root of cortisol measurements between the groups.

Keywords: Mixed-effects models, Bayesian Inference, Correlated data, Cortisol.