

Multilevel binary regression with outcome uncertainty

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Resumo

In this paper we present a multilevel binary model when the outcome is measured with uncertainty. We are interested in obtaining association measures, such as odds ratio, while taking into account specificity and sensitivity of the outcome. Posterior inference is implemented using Hamiltonian Monte Carlo and also integrated nested Laplace approximation (INLA). A simulation study is provided and the method is applied on Brazilian alcohol and drug abuse data sets.