

Discussion on *Hierarchical Data Analysis* by Nelia S. Ereno

The paper presents a series of models starting with the Aggregate Data Model, the Subsample Covariate Model and the Bayesian Disease Mapping Model, to come up with the final Hierarchical Aggregate Data Model with spatial correlations between groups of interest. The latter part presents a discussion of the different sources of bias. The score estimating equation for the parameters of the quadratic exponential model was also given.

Comment. The paper fell short of the promise one expects from reading the abstract. The discussion on bias is more a review of literature rather than a presentation of results. The models could have been presented using a common example so that readers can be made aware of the differences in the individual models. Also, for each model there is a common variable x but should be interpreted differently for each model. The discussion on bias can be improved if the proponent gave definitions to the factors contributing to bias. Terms like "within- and between-group confounding", effect modification", exposure misclassification", mutual standardization", etc. are not usually encountered even by practicing statisticians.