



ON ZERO-TRUNCATED GENERALIZED POISSON COUNT REGRESSION MODEL

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Abstract

In this paper, we employed SAS PROC NLMIXED (Nonlinear mixed model procedure) to fit the Zero-truncated generalized Poisson regression model to the medpar data. Our analysis is motivated by a similar analysis by Zhao et al. [J. East China Normal University 1 (2010), 17-23] utilizing maximum likelihood estimation and employing the score tests for testing the significance of the parameters. However, in this paper, we also considered the Zero-truncated negative binomial model. In all, six models are considered and compared in our analysis. The test of significance for the parameters of the models and that of the dispersion auxiliary parameters are readily tested within the output from PROC NLMIXED. Further, we computed the goodness-of-fit deviances for each of the models considered here. We also obtain the Akaike Information Criterion (AIC) as well as the Bayesian Information Criterion (BIC) for each of the models.

Keywords and phrases: deviance, Poisson, negative binomial, generalized Poisson, zero-truncated, over-dispersion, log-likelihood.

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