ANALISIS REGRESI LOGISTIK EKSAK PADA PENANGANAN SAMPEL KECIL

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Abstract: *Correlation between a categorical response variable and one or several predictor variables involving larger samples is analyzed using logistic regression method. However, if the sample size is small and the data are sparse, the relevance of conventional (asymptotic) logistic regression method to use in such correlation analysis will be questioned.*

This is a statistical study for application of exact logistic regression in the conditional of small sample size and sparse data.

Exact logistic regression analysis was done to cases with sample size of 10, 20, 29 and 55 taken from results of random sampling data. obtained by immunization. The dependent variable was immunization status, and he independent variable was people's exposure to information, education, occupation, living children, knowledge, attitude and participation. The data were analyzed with logxact Turbo program.

Result showed that parameter estimation and hypothesis test using exact test provided better solution compared to conventional (asymptotic) logistic regression test such as likelihood ratio, Wald, and Score test. Exact test also provided correlation type or model with sample size of 10, 20, 29 and 55 and wider confidance interval compared to asymptotic inference type. Probability between those intervals had, therefore, larger parameter of population. For test involving numerous independent variables, exact logistic regression method also provided better solution compared to there conventional (asymptotic) logistic regression test. Exact logistic regression method should be used in statistical test with small sample size and spare data and tests that use table with sparse value in each of its cells

Keywords *: Exact logistic regression, asymptotic*