MARKOV TRANSITION MODELS: A FOCUS ON PLANNED EXPERIMENTS WITH CORRELATED BINARY DATA

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- ABSTRACT: The transition Markov models are a very important tool for several areas of knowledge when studies are developed with repeated measures. They are characterized by modeling the response variable over time conditional to the previous response which is known as the history. In addition it is possible to include other covariates. In the case of binary responses, can be constructed a matrix of transition probabilities from one state to another. In this work, two different approach of transition models were compared in order to assess which best estimates of the causal effect of treatments in an experimental studies where the outcome is a vector of binary response measured over time. Simulation study was held taking into account a balanced experiments with three treatments of categorical nature. To assess the best estimates standard error, bias and percentage of coverage were used. The results showed that the marginal transition models may be more appropriate in situations in which an experiment is developed with a reduced number of repeated measurements.
- KEYWORDS**:** Binary data; repeated measures; causal treatment effect.

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