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Identifiability in generalized linear models with random effects. (Persian. English summary)

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Summary: Identifiability is a necessary property for the adequacy of a statistical model. When a model is not identifiable, not amount of data cannot determine true parameter. In this article, well-known concept of identifiability and its properties is reviewed. Moreover, since non-identifiability problem in linear mixed effects models and generalized linear models with random effects is very common, our main focus is on these models. On the other hand, statistical software, after fitting non-identifiable models, don't usually indicate the problem and show invalid outputs. Consequently, it is useful to have a way to check model identifiability before fitting. In this regard, some new theorems to check identifiability in generalized linear models with random effects are presented. data from non-identifiable models are simulated and problems with model non-identifiability are listed for showing advantages of the mentioned theorems.

MSC:

62J12 Generalized linear models (logistic models)

62J05 Linear regression; mixed models

Keywords:





identifiability; linear mixed effects models; generalized linear random effects models

Software:

MEMSS; WWGbook; S-PLUS

Full Text: [Link](#)

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