

USEFUL METHOD TO CALCULATE THE MAXIMUM LIKELIHOOD ESTIMATION OF GENERALIZED GAMMA DISTRIBUTION

Pedro Luiz RAMOS¹
Jorge Alberto ACHCAR²
Eduardo RAMOS³

- *ABSTRACT: In this paper, we introduce an alternative to simplify the likelihood equations for the parameters of the generalized gamma distribution considering complete data sets, in a way to minimize the problem of instability of the iterative procedure used to numerically obtain the maximum likelihood estimates. It is also proposed some ways to get good initial values to be used in the iterative procedure considering censored or uncensored data. Some examples to illustrate the proposed methodology are considered using literature data and real data sets.*
- *KEYWORDS: Generalized gamma distribution; maximum likelihood estimates; censored data; lifetime data.*

¹ Universidade de São Paulo - USP, ICMC, Programa de Pós-Graduação em Estatística, CEP: 13566-590, São Carlos, SP, Brasil. E-mail: pedrolramos@hotmail.com

² Universidade de São Paulo - USP, Faculdade de Medicina de Ribeirão Preto - FMRP, Departamento de Medicina Social, CEP: 14049-900, Ribeirão Preto, SP, Brasil. E-mail: achcar@fmrp.usp.br

³ Universidade Estadual Paulista - UNESP, Faculdade de Ciências e Tecnologia - FCT, CEP: 19060-900, Presidente Prudente, SP, Brasil. E-mail: edudkm@hotmail.com