A parametric model for doubly interval censored lifetime

ABSTRACT

Doubly interval censored data is defined as elapsed time between two related events that is subject to interval or right censoring. In this paper, we extended a parametric model to incorporates doubly interval-, interval-, right censored and uncensored lifetime data. We assumed the initial event time follows uniform distribution and the lifetime follows the log logistic distribution. The interval censored event times are imputed using midpoint of their intervals for ease of the estimation process. The estimation procedure is studied at different sample sizes and attendance probabilities using simulated data. Finally, we study the Wald method of constructing confidence interval estimates for the parameters of the model. Conclusions were drawn based on the coverage probability study.