

The logistic regression model with a modified response probability in survival analysis

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A concern often expressed by researchers is the evaluation of probability of survival beyond a specified time point or age limit. The traditional logistic regression model uses a response probability which lacks the capacity to project into the future. The Survivor function which has the ability for future projection lacks the capacity to specify the upper bound of the extra survival time. To midwife for a solution between these two problems, the survivor function is modeled by radical exponentiation of the response probability. The proposed model has the advantage of specifying the probability of extra survival time, future survival probability and the probability at a given time. The complement of the hazard function is used in the evaluation of the exponent. The proposed response probability is a generalization of the existing response probability and allows for extrapolation of future probability.

Biography

Uchenna Petronilla Ogoke is a lecturer of the University of Port Harcourt in the department of Mathematics and Statistics, Faculty of Science, University of Port Harcourt, Rivers State, Nigeria. She held a master's degree in Statistics and currently, she is running a Ph.D. program in Biostatistics, from the same University. She has published papers in International Journal of Biostatistics and as conference proceedings. She is a member of the International Biometrics Society (IBS), and Nigerian Statistical Association. She has attended several (local and international) workshops and conferences. She has a flair in Statistical analysis with bias on the use of software like SPSS, SAS, SOLAS, WinMICE, and STATA.

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