The objective of this study is to compare the interval estimation methods for survival functions with censored data by comparing their confidence levels and average confidence interval lengths. The estimation methods under consideration in this study are Equal precision method ,Hall-Wellner method ,and Renyi method. The experimentation data are generated through the Monte Carlo Simulation technique with sample sizes 25,50,100,and 200 . The analysis of data is performed in case of random censored data by studying the uncensored data distributions from Weibull ,Lognormal ,and Gompertz ; the censored data distributions from Uniform and Exponential. This study is made on censoring proportions 10%,20%,and 30% ; confidence levels 90%,95%,and 99% ; survival time ranging from 0.25 to 3.00 increasing by 0.25. The experiment is repeated 2,000 times under each case. The conclusions of this study are as follows:-

1) Confidence levels

In most cases, the confidence levels of Equal precision method and Hall-Wellner method are not lower than the given confidence levels of 90%,95%,99%. The confidence levels of Renyi method are not lower than the given confidence levels of 90%,95%,99% when survival functions are more than 0.3 ($S(t) > 0.3$).

2) Average confidence interval lengths

In most cases, average confidence interval lengths of Equal precision method are shortest when survival functions are low ($S(t) < 0.3$) or high ($S(t) > 0.75$). Average confidence interval lengths of Hall-Wellner method are shortest when survival functions are medium ($0.3 < S(t) < 0.75$).

The average confidence interval length varies directly with confidence level and censoring proportion and varies indirectly with sample size.

ภาควิชา.. ลายมือชื่อนิสิต..

สาขาวิชา.. ลายมือชื่ออาจารย์ที่ปรึกษา..

ปีการศึกษา.. ลายมือชื่ออาจารย์ที่ปรึกษาร่วม..