Intraclass correlation estimation using ranked set sampling - a simulation study

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Abstract: Ranked set sampling is a cost-effective alternative to simple random sampling. In this study we evaluate the performance of ranked set sampling for estimating the intraclass correlation coefficient. Simulated results showed that ranked set sampling produces less biased, more efficient and robust estimates than its simple random sampling counterpart.

Keywords: Mean squared error; Monte Carlo simulation; Non-normality; Repeatability; Variance components.

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