

The A Priori Procedure (APP) for estimating the location parameter of the Laplace distribution

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Abstract: The present research addresses two main goals. One goal is to extend the a priori procedure (APP) to the Laplace distribution, to facilitate the ability of researchers to collect appropriate sample sizes for estimating population means. Secondly, although it may seem intuitive that the sample mean is the best estimate of the corresponding population mean, we show that sample medians are more efficient estimators than sample means under Laplace distributions. Simulations and a worked example with real data support the mathematical derivation. Finally, we include a link to a free and user-friendly computer program so researchers can easily perform their own computations.

Key Words: Laplace distribution; a priori procedure; required sample size; maximum likelihood estimate; sample median