
Missing data analyses have received considerable recent attention in the methodological literature, and two “modern” methods, multiple imputation and maximum likelihood estimation, are recommended. The goals of this article are to (a) provide an overview of missing-data theory, maximum likelihood estimation, and multiple imputation; (b) conduct a methodological review of missing-data reporting practices in 23 applied research journals; and (c) provide a demonstration of multiple imputation and maximum likelihood estimation using the Longitudinal Study of American Youth data.

Methodological review results indicated that explicit discussions of missing data increased substantially between 1999 and 2003, but the use of maximum likelihood estimation or multiple imputation was rare; the studies relied almost exclusively on listwise and pairwise deletion. By illustrating the use of maximum likelihood and multiple imputation using the LSAY data, it is hoped the applied research will begin to adopt these two “modern” missing data methods in their own research studies.

This Research Digest is a product of the Nebraska Center for Research on Children, Youth, Families and Schools. The research presented is a sample of state-of-the-art research conducted in the area of qualitative and quantitative measurement by faculty at UNL. For more information on the Center, please contact Holly Sexton at hsexton1@unl.edu