dynamicalSystemsNotes: References

Ivan Jacob Agaloos Pesigan

References

- Allison, P. (2002). Missing data. SAGE Publications, Inc. https://doi.org/10.4135/9781412985079
- Allison, P. D. (2000). Multiple imputation for missing data: A cautionary tale. Sociological Methods & Research, 28(3), 301–309. https://doi.org/10.1177/0049124100028003003
- Andrews, D. W. K. (1991). Heteroskedasticity and autocorrelation consistent covariance matrix estimation. *Econometrica*, 59(3), 817. https://doi.org/10.2307/2938229
- Andrews, D. W. K. (2000). Inconsistency of the bootstrap when a parameter is on the boundary of the parameter space. *Econometrica*, 68(2), 399–405. https://doi.org/10.1111/1468-0262.00114
- Andrews, D. W. K., & Monahan, J. C. (1992). An improved heteroskedasticity and autocorrelation consistent covariance matrix estimator. *Econometrica*, 60(4), 953. https://doi.org/10.2307/2951574
- Arbuckle, J. L. (1996). Full information estimation in the presence of incomplete data. In G. A. Marcoulides & R. E. Schumacker (Eds.), *Advanced structural equation modeling*. Psychology Press. https://doi.org/10.4324/9781315827414
- Arbuckle, J. L. (2014). Amos 23.0 user's guide. Chicago, IBM SPSS.
- Arbuckle, J. L. (2019). Amos 26.0 user's guide. Chicago, IBM SPSS.
- Arbuckle, J. L. (2020). Amos 27.0 user's guide. Chicago, IBM SPSS.
- Arbuckle, J. L. (2021). Amos 28.0 user's guide. Chicago, IBM SPSS.

- Aroian, L. A. (1947). The probability function of the product of two normally distributed variables.

 The Annals of Mathematical Statistics, 18(2), 265–271. https://doi.org/10.1214/aoms/
 1177730442
- Asparouhov, T., & Muthén, B. O. (2022). Multiple imputation with Mplus (tech. rep.). http://www.statmodel.com/download/Imputations7.pdf
- Azur, M. J., Stuart, E. A., Frangakis, C., & Leaf, P. J. (2011). Multiple imputation by chained equations: What is it and how does it work? *International Journal of Methods in Psychiatric Research*, 20(1), 40–49. https://doi.org/10.1002/mpr.329
- Barnard, G. A., Collins, J. R., Farewell, V. T., Field, C. A., Kalbfleisch, J. D., Nash, S. W., Parzen, E., Prentice, R. L., Reid, N., Sprott, D. A., Switzer, P., Warren, W. G., & Weldon, K. L. (1981). Nonparametric standard errors and confidence intervals: Discussion. The Canadian Journal of Statistics / La Revue Canadienne de Statistique, 9(2), 158–170. https://doi.org/10.2307/3314609
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173
- Bauer, D. J., Preacher, K. J., & Gil, K. M. (2006). Conceptualizing and testing random indirect effects and moderated mediation in multilevel models: New procedures and recommendations. *Psychological Methods*, 11(2), 142–163. https://doi.org/10.1037/1082-989x.11.2.142
- Beasley, T. M. (2013). Tests of mediation: Paradoxical decline in statistical power as a function of mediator collinearity. The Journal of Experimental Education, 82(3), 283–306. https://doi.org/10.1080/00220973.2013.813360
- Beesley, L. J., & Taylor, J. M. G. (2020). A stacked approach for chained equations multiple imputation incorporating the substantive model. *Biometrics*, 77(4), 1342–1354. https://doi.org/10.1111/biom.13372
- Behrendt, S. (2014). lm.beta: Add standardized regression coefficients to lm-objects. https://CRAN.

 R-project.org/package=lm.beta

- Bentler, P. M. (2006). EQS 6 structural equations program manual. Encino, CA, Multivariate Software, Inc.
- Biesanz, J. C., Falk, C. F., & Savalei, V. (2010). Assessing mediational models: Testing and interval estimation for indirect effects. *Multivariate Behavioral Research*, 45(4), 661–701. https://doi.org/10.1080/00273171.2010.498292
- Blair, R. C. (1981). A reaction to "consequences of failure to meet assumptions underlying the fixed effects analysis of variance and covariance". *Review of Educational Research*, 51(4), 499–507. https://doi.org/10.3102/00346543051004499
- Blanca, M. J., Arnau, J., López-Montiel, D., Bono, R., & Bendayan, R. (2013). Skewness and kurtosis in real data samples. *Methodology*, 9(2), 78–84. https://doi.org/10.1027/1614-2241/a000057
- Boettiger, C., & Eddelbuettel, D. (2017). An introduction to Rocker: Docker containers for R. *The R Journal*, 9(2), 527. https://doi.org/10.32614/rj-2017-065
- Bollen, K. A., & Stine, R. (1990). Direct and indirect effects: Classical and bootstrap estimates of variability. *Sociological Methodology*, 20, 115. https://doi.org/10.2307/271084
- Bono, R., Blanca, M. J., Arnau, J., & Gómez-Benito, J. (2017). Non-normal distributions commonly used in health, education, and social sciences: A systematic review. Frontiers in Psychology, 8. https://doi.org/10.3389/fpsyg.2017.01602
- Bradley, J. V. (1968). Distribution free statistical tests. Englewood Cliffs, NJ, Prentice-Hall.
- Bradley, J. V. (1978). Robustness? British Journal of Mathematical and Statistical Psychology, 31(2), 144–152. https://doi.org/10.1111/j.2044-8317.1978.tb00581.x
- Bradley, J. V. (1982). The insidious L-shaped distribution. Bulletin of the Psychonomic Society, 20(2), 85–88. https://doi.org/10.3758/bf03330089
- Browne, M. W. (1984). Asymptotically distribution-free methods for the analysis of covariance structures. British Journal of Mathematical and Statistical Psychology, 37(1), 62–83. https://doi.org/10.1111/j.2044-8317.1984.tb00789.x
- Canty, A., & Ripley, B. D. (2020). boot: Bootstrap R (S-Plus) functions. https://CRAN.R-project.org/package=boot

- Chan, W., Yung, Y.-F., & Bentler, P. M. (1995). A note on using and unbiased weight matrix in the ADF test statistic. *Multivariate Behavioral Research*, 30(4), 453–459. https://doi.org/10.1207/s15327906mbr3004_1
- Chang, W., Cheng, J., Allaire, J. J., Xie, Y., & McPherson, J. (2020). shiny: Web application framework for R. The R Foundation. https://CRAN.R-project.org/package=shiny
- Cheema, J. R. (2014). A review of missing data handling methods in education research. Review of Educational Research, 84(4), 487–508. https://doi.org/10.3102/0034654314532697
- Chernick, M. R. (2008). Bootstrap methods: A guide for practitioners and researchers (2nd ed.).

 Hoboken, N.J., Wiley-Interscience. https://doi.org/10.1002/9780470192573
- Chernick, M. R., & LaBudde, R. A. (2011). An introduction to bootstrap methods with applications to R. Hoboken, N.J., Wiley.
- Chesher, A., & Jewitt, I. (1987). The bias of a heteroskedasticity consistent covariance matrix estimator. *Econometrica*, 55(5), 1217. https://doi.org/10.2307/1911269
- Cheung, G. W., & Lau, R. S. (2007). Testing mediation and suppression effects of latent variables. Organizational Research Methods, 11(2), 296–325. https://doi.org/10.1177/1094428107300343
- Cheung, M. W.-L. (2007a). Comparison of approaches to constructing confidence intervals for mediating effects using structural equation models. Structural Equation Modeling: A Multi-disciplinary Journal, 14(2), 227–246. https://doi.org/10.1080/10705510709336745
- Cheung, M. W.-L. (2007b). Comparison of approaches to constructing confidence intervals for mediating effects using structural equation models. Structural Equation Modeling: A Multi-disciplinary Journal, 14(2), 227–246. https://doi.org/10.1080/10705510709336745
- Cheung, M. W.-L. (2009a). Comparison of methods for constructing confidence intervals of standardized indirect effects. *Behavior Research Methods*, 41(2), 425–438. https://doi.org/10. 3758/brm.41.2.425
- Cheung, M. W.-L. (2009b). Comparison of methods for constructing confidence intervals of standardized indirect effects. *Behavior Research Methods*, 41(2), 425–438. https://doi.org/10. 3758/brm.41.2.425

- Cheung, M. W.-L. (2009c). Comparison of methods for constructing confidence intervals of standardized indirect effects. *Behavior Research Methods*, 41(2), 425–438. https://doi.org/10. 3758/brm.41.2.425
- Cheung, M. W.-L. (2009d). Constructing approximate confidence intervals for parameters with structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, 16(2), 267–294. https://doi.org/10.1080/10705510902751291
- Cheung, M. W.-L. (2021). Synthesizing indirect effects in mediation models with meta-analytic methods. *Alcohol and Alcoholism*, 57(1), 5–15. https://doi.org/10.1093/alcalc/agab044
- Cheung, S. F., Pesigan, I. J. A., & Vong, W. N. (2022). DIY bootstrapping: Getting the non-parametric bootstrap confidence interval in SPSS for any statistics or function of statistics (when this bootstrapping is appropriate). Behavior Research Methods. https://doi.org/10.3758/s13428-022-01808-5
- Cochran, W. G. (1952). The χ^2 test of goodness of fit. The Annals of Mathematical Statistics, 23(3), 315-345. https://doi.org/10.1214/aoms/1177729380
- Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Routledge. https://doi.org/10.4324/9780203771587
- Collins, L. M., Schafer, J. L., & Kam, C.-M. (2001). A comparison of inclusive and restrictive strategies in modern missing data procedures. *Psychological Methods*, 6(4), 330–351. https://doi.org/10.1037/1082-989x.6.4.330
- Craig, C. C. (1936). On the frequency function of xy. The Annals of Mathematical Statistics, 7(1), 1–15. https://doi.org/10.1214/aoms/1177732541
- Cribari-Neto, F. (2004). Asymptotic inference under heteroskedasticity of unknown form. Computational Statistics & Data Analysis, 45(2), 215–233. https://doi.org/10.1016/s0167-9473(02)00366-3
- Cribari-Neto, F., & da Silva, W. B. (2010). A new heteroskedasticity-consistent covariance matrix estimator for the linear regression model. *AStA Advances in Statistical Analysis*, 95(2), 129–146. https://doi.org/10.1007/s10182-010-0141-2

- Cribari-Neto, F., Souza, T. C., & Vasconcellos, K. L. P. (2007). Inference under heteroskedasticity and leveraged data. Communications in Statistics Theory and Methods, 36 (10), 1877–1888. https://doi.org/10.1080/03610920601126589
- Cribari-Neto, F., Souza, T. C., & Vasconcellos, K. L. P. (2008). Errata: Inference under heteroskedasticity and leveraged data, Communications in Statistics, Theory and Methods, 36, 1877–1888, 2007. Communications in Statistics Theory and Methods, 37(20), 3329–3330. https://doi.org/10.1080/03610920802109210
- Davidson, R., & MacKinnon, J. G. (1993). Estimation and inference in econometrics. New York, NY, Oxford University Press.
- Davison, A. C., & Hinkley, D. V. (1997). Bootstrap methods and their application. Cambridge, New York, NY, USA, Cambridge University Press. https://doi.org/10.1017/CBO9780511802843
- Du, H., & Bentler, P. M. (2021). Distributionally weighted least squares in structural equation modeling. *Psychological Methods*. https://doi.org/10.1037/met0000388
- Dudgeon, P. (2017a). Some improvements in confidence intervals for standardized regression coefficients. *Psychometrika*, 82(4), 928–951. https://doi.org/10.1007/s11336-017-9563-z
- Dudgeon, P. (2017b). Some improvements in confidence intervals for standardized regression coefficients. *Psychometrika*, 82(4), 928–951. https://doi.org/10.1007/s11336-017-9563-z
- Efron, B. (1979a). Bootstrap methods: Another look at the jackknife. *The Annals of Statistics*, 7(1). https://doi.org/10.1214/aos/1176344552
- Efron, B. (1979b). Computers and the theory of statistics: Thinking the unthinkable. SIAM Review, 21(4), 460–480. https://doi.org/10.1137/1021092
- Efron, B. (1981a). Nonparametric standard errors and confidence intervals. Canadian Journal of Statistics / La Revue Canadienne de Statistique, 9(2), 139–158. https://doi.org/10.2307/3314608
- Efron, B. (1981b). Nonparametric standard errors and confidence intervals: Rejoinder. The Canadian Journal of Statistics / La Revue Canadianne de Statistique, 9(2), 170–172. https://doi.org/10.2307/3314610

- Efron, B. (1982). The jackknife, the bootstrap and other resampling plans. Philadelphia, Pa., Society for Industrial; Applied Mathematics. https://doi.org/10.1137/1.9781611970319
- Efron, B. (1987). Better bootstrap confidence intervals. Journal of the American Statistical Association, 82(397), 171–185. https://doi.org/10.1080/01621459.1987.10478410
- Efron, B. (1988). Bootstrap confidence intervals: Good or bad? *Psychological Bulletin*, 104(2), 293–296. https://doi.org/10.1037/0033-2909.104.2.293
- Efron, B. (2012). Bayesian inference and the parametric bootstrap. The Annals of Applied Statistics, 6(4). https://doi.org/10.1214/12-aoas571
- Efron, B., & Hastie, T. (2016a). Bootstrap confidence intervals. In Computer age statistical inference.

 Cambridge University Press. https://doi.org/10.1017/cbo9781316576533
- Efron, B., & Hastie, T. (2016b). The jackknife and the bootstrap. In Computer age statistical inference. Cambridge University Press. https://doi.org/10.1017/cbo9781316576533
- Efron, B., & Tibshirani, R. J. (1993). An introduction to the bootstrap. New York, Chapman & Hall. https://doi.org/10.1201/9780429246593
- Enders, C. K. (2001a). The impact of nonnormality on full information maximum-likelihood estimation for structural equation models with missing data. Psychological Methods, 6(4), 352-370. https://doi.org/10.1037/1082-989x.6.4.352
- Enders, C. K. (2001b). A primer on maximum likelihood algorithms available for use with missing data. Structural Equation Modeling: A Multidisciplinary Journal, 8(1), 128–141. https://doi.org/10.1207/s15328007sem0801_7
- Enders, C. K. (2010a). Applied missing data analysis. Guilford Publications.
- Enders, C. K. (2010b). Applied missing data analysis. Guilford Publications.
- Fay, R. E. (1994). [multiple-imputation inferences with uncongenial sources of input]: Comment. Statistical Science, 9(4). https://doi.org/10.1214/ss/1177010270
- Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect.

 Psychological Science, 18(3), 233–239. https://doi.org/10.1111/j.1467-9280.2007.01882.x

- Fritz, M. S., Taylor, A. B., & MacKinnon, D. P. (2012). Explanation of two anomalous results in statistical mediation analysis. *Multivariate Behavioral Research*, 47(1), 61–87. https://doi.org/10.1080/00273171.2012.640596
- Fuller, W. A. (1987). Measurement error models (W. A. Fuller, Ed.). John Wiley & Sons, Inc. https://doi.org/10.1002/9780470316665
- Glass, G. V., Peckham, P. D., & Sanders, J. R. (1972). Consequences of failure to meet assumptions underlying the fixed effects analyses of variance and covariance. *Review of Educational Research*, 42(3), 237–288. https://doi.org/10.3102/00346543042003237
- Godfrey, L. (2009). Bootstrap tests for regression models. Basingstoke, Hampshire, New York, NY, Palgrave Macmillan. https://doi.org/10.1057/9780230233737
- Good, P. I. (2005). Permutation, parametric and bootstrap tests of hypotheses. New York, Springer. https://doi.org/10.1007/b138696
- Goodman, L. A. (1960). On the exact variance of products. Journal of the American Statistical Association, 55(292), 708–713. https://doi.org/10.1080/01621459.1960.10483369
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, 60(1), 549–576. https://doi.org/10.1146/annurev.psych.58.110405.085530
- Graham, J. W. (2012). *Missing data*. Springer New York. https://doi.org/10.1007/978-1-4614-4018-5
- Graham, J. W., Olchowski, A. E., & Gilreath, T. D. (2007). How many imputations are really needed? some practical clarifications of multiple imputation theory. *Prevention Science*, 8(3), 206–213. https://doi.org/10.1007/s11121-007-0070-9
- Hall, P. (1992). The bootstrap and Edgeworth expansion. New York, Springer-Verlag. https://doi. org/10.1007/978-1-4612-4384-7
- Harel, O., & Zhou, X.-H. (2007). Multiple imputation: Review of theory, implementation and software. Statistics in Medicine, 26(16), 3057–3077. https://doi.org/10.1002/sim.2787
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. Communication Monographs, 76(4), 408–420. https://doi.org/10.1080/03637750903310360

- Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Guilford Publications.
- Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach (2nd ed.). Guilford Publications.
- Hayes, A. F. (2022). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach (3rd ed.). Guilford Publications.
- Hayes, A. F., & Cai, L. (2007). Using heteroskedasticity-consistent standard error estimators in OLS regression: An introduction and software implementation. Behavior Research Methods, 39(4), 709–722. https://doi.org/10.3758/bf03192961
- Hayes, A. F., & Scharkow, M. (2013a). The relative trustworthiness of inferential tests of the indirect effect in statistical mediation analysis. *Psychological Science*, 24(10), 1918–1927. https://doi.org/10.1177/0956797613480187
- Hayes, A. F., & Scharkow, M. (2013b). The relative trustworthiness of inferential tests of the indirect effect in statistical mediation analysis. *Psychological Science*, 24(10), 1918–1927. https://doi.org/10.1177/0956797613480187
- Heitjan, D. F., & Little, R. J. A. (1988). Multiple imputation for the fatal accident reporting system, In Jsm proceedings, survey research methods section, Alexandria, VA, American Statistical Association. http://www.asasrms.org/Proceedings/papers/1988_018.pdf
- Hernández, J. A., Ramírez, G., & Sánchez, A. (1997). A high-level language program to obtain the bootstrap corrected ADF test statistic. *Behavior Research Methods, Instruments, & Computers*, 29(2), 296–301. https://doi.org/10.3758/bf03204830
- Hesterberg, T. C. (2014). What teachers should know about the bootstrap: Resampling in the undergraduate statistics curriculum. https://arxiv.org/abs/1411.5279
- Hesterberg, T. C. (2015). What teachers should know about the bootstrap: Resampling in the undergraduate statistics curriculum. *The American Statistician*, 69(4), 371–386. https://doi.org/10.1080/00031305.2015.1089789
- Hinkley, D. V. (1977). Jackknifing in unbalanced situations. Technometrics, 19(3), 285-292. https://doi.org/10.1080/00401706.1977.10489550

- Hoogland, J. J., & Boosma, A. (1998). Robustness studies in covariance structure modeling. Sociological Methods & Research, 26(3), 329–367. https://doi.org/10.1177/0049124198026003003
- Horn, S. D., Horn, R. A., & Duncan, D. B. (1975). Estimating heteroscedastic variances in linear models. Journal of the American Statistical Association, 70 (350), 380–385. https://doi. org/10.1080/01621459.1975.10479877
- Hoyle, R. H., & Kenny, D. A. (1999). Sample size, reliability and tests of statistical mediation. In R. H. Hoyle (Ed.), Statistical strategies for small sample research (pp. 195–222). Sage Publications.
- James, L. R., & Brett, J. M. (1984). Mediators, moderators, and tests for mediation. *Journal of Applied Psychology*, 69(2), 307–321. https://doi.org/10.1037/0021-9010.69.2.307
- JASP Team. (2022). JASP (Version 0.16.1)[Computer software]. https://jasp-stats.org/
- Jones, J. A., & Waller, N. G. (2013a). Computing confidence intervals for standardized regression coefficients. *Psychological Methods*, 18(4), 435–453. https://doi.org/10.1037/a0033269
- Jones, J. A., & Waller, N. G. (2013b). The normal-theory and asymptotic distribution-free (ADF) covariance matrix of standardized regression coefficients: Theoretical extensions and finite sample behavior (tech. rep.). University of Minnesota-Twin Cities. Retrieved October 18, 2021, from http://users.cla.umn.edu/~nwaller/downloads/techreports/TR052913.pdf
- Jones, J. A., & Waller, N. G. (2015). The normal-theory and asymptotic distribution-free (ADF) covariance matrix of standardized regression coefficients: Theoretical extensions and finite sample behavior. *Psychometrika*, 80(2), 365–378. https://doi.org/10.1007/s11336-013-9380-y
- Jorgensen, T. D., Pornprasertmanit, S., Schoemann, A. M., & Rosseel, Y. (2022). semTools: Useful tools for structural equation modeling. https://CRAN.R-project.org/package=semTools
- Jose, P. E. (2013). Doing statistical mediation and moderation. Guilford Publications.
- Judd, C. M., & Kenny, D. A. (1981). Process analysis. Evaluation Review, 5(5), 602–619. https://doi.org/10.1177/0193841x8100500502

- Kauermann, G., & Carroll, R. J. (2001). A note on the efficiency of sandwich covariance matrix estimation. *Journal of the American Statistical Association*, 96(456), 1387–1396. https://doi.org/10.1198/016214501753382309
- Kenny, D. A., & Judd, C. M. (2013). Power anomalies in testing mediation. Psychological Science, 25(2), 334–339. https://doi.org/10.1177/0956797613502676
- Kenward, M. G., & Carpenter, J. (2007). Multiple imputation: Current perspectives. Statistical Methods in Medical Research, 16(3), 199–218. https://doi.org/10.1177/0962280206075304
- Kim, J. K., & Shao, J. (2013). Statistical methods for handling incomplete data. Chapman; Hall/CRC. https://doi.org/10.1201/b13981
- King, G., Honaker, J., Joseph, A., & Scheve, K. (2001). Analyzing incomplete political science data: An alternative algorithm for multiple imputation. American Political Science Review, 95(1), 49–69. https://doi.org/10.1017/s0003055401000235
- Kisbu-Sakarya, Y., MacKinnon, D. P., & Miočević, M. (2014). The distribution of the product explains normal theory mediation confidence interval estimation. *Multivariate Behavioral Research*, 49(3), 261–268. https://doi.org/10.1080/00273171.2014.903162
- Koning, R. H., Neudecker, H., & Wansbeek, T. (1992). Unbiased estimation of fourth-order matrix moments. Linear Algebra and its Applications, 160, 163–174. https://doi.org/10.1016/0024-3795(92)90445-g
- Koopman, J., Howe, M., & Hollenbeck, J. R. (2014). Pulling the Sobel test up by its bootstraps. In More statistical and methodological myths and urban legends: Doctrine, verity and fable in organizational and social sciences (pp. 224–243). Routledge/Taylor & Francis Group. https://doi.org/10.4324/9780203775851
- Koopman, J., Howe, M., Hollenbeck, J. R., & Sin, H.-P. (2015). Small sample mediation testing: Misplaced confidence in bootstrapped confidence intervals. *Journal of Applied Psychology*, 100(1), 194–202. https://doi.org/10.1037/a0036635
- Kropko, J., Goodrich, B., Gelman, A., & Hill, J. (2014). Multiple imputation for continuous and categorical data: Comparing joint multivariate normal and conditional approaches. *Political Analysis*, 22(4), 497–519. https://doi.org/10.1093/pan/mpu007

- Kwan, J. L. Y., & Chan, W. (2011). Comparing standardized coefficients in structural equation modeling: A model reparameterization approach. Behavior Research Methods, 43(3), 730– 745. https://doi.org/10.3758/s13428-011-0088-6
- Lall, R. (2016). How multiple imputation makes a difference. *Political Analysis*, 24(4), 414–433. https://doi.org/10.1093/pan/mpw020
- Li, K. H., Raghunathan, T. E., & Rubin, D. B. (1991). Large-sample significance levels from multiply imputed data using moment-based statistics and an F reference distribution. Journal of the American Statistical Association, 86(416), 1065-1073. https://doi.org/10.1080/01621459. 1991.10475152
- Little, R. J. A., & Rubin, D. B. (2002). Statistical analysis with missing data (2nd ed.). John Wiley & Sons, Inc. https://doi.org/10.1002/9781119013563
- Little, R. J. A., & Rubin, D. B. (2019). Statistical analysis with missing data (3rd ed.). Wiley. https://doi.org/10.1002/9781119482260
- Liu, X. S. (2013). Statistical power analysis for the social and behavioral sciences. Routledge. https://doi.org/10.4324/9780203127698
- Long, J. S., & Ervin, L. H. (2000). Using heteroscedasticity consistent standard errors in the linear regression model. The American Statistician, 54(3), 217–224. https://doi.org/10.1080/ 00031305.2000.10474549
- MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. Hoboken, Erlbaum Psych Press. https://doi.org/10.4324/9780203809556
- MacKinnon, D. P., Fritz, M. S., Williams, J., & Lockwood, C. M. (2007). Distribution of the product confidence limits for the indirect effect: Program PRODCLIN. *Behavior Research Methods*, 39(3), 384–389. https://doi.org/10.3758/bf03193007
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7(1), 83–104. https://doi.org/10.1037/1082-989x.7.1.83

- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004a). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39(1), 99–128. https://doi.org/10.1207/s15327906mbr3901_4
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004b). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39(1), 99–128. https://doi.org/10.1207/s15327906mbr3901_4
- MacKinnon, J. G., & White, H. (1985). Some heteroskedasticity-consistent covariance matrix estimators with improved finite sample properties. *Journal of Econometrics*, 29(3), 305–325. https://doi.org/10.1016/0304-4076(85)90158-7
- McKnight, P. E., McKnight, K. M., Sidani, S., & Figueredo, A. J. (2007). *Missing data: A gentle introduction*. Guilford Publications.
- Meng, X.-L. (1994a). [multiple-imputation inferences with uncongenial sources of input]: Rejoinder. Statistical Science, 9(4). https://doi.org/10.1214/ss/1177010274
- Meng, X.-L. (1994b). Multiple-imputation inferences with uncongenial sources of input. Statistical Science, 9(4). https://doi.org/10.1214/ss/1177010269
- Micceri, T. (1989). The unicorn, the normal curve, and other improbable creatures. *Psychological Bulletin*, 105(1), 156–166. https://doi.org/10.1037/0033-2909.105.1.156
- Molenberghs, G., Fitzmaurice, G., Kenward, M. G., & Tsiatis, A. (2014). *Handbook of missing data methodology*. Chapman; Hall/CRC. https://doi.org/10.1201/b17622
- Murphy, K. R., Myors, B., & Wolach, A. (2014). Statistical power analysis: A simple and general model for traditional and modern hypothesis tests (4th ed.). Routledge. https://doi.org/10. 4324/9781315773155
- Muthén, L. K., & Muthén, B. O. (2017). Mplus user's guide. Eighth edition. Los Angeles, CA, Muthén & Muthén.
- National Research Council. (1982). An assessment of research-doctorate programs in the United States: Social and behavioral sciences. Washington, D.C., National Academies Press. https://doi.org/10.17226/9781

- Neale, M. C., Hunter, M. D., Pritikin, J. N., Zahery, M., Brick, T. R., Kirkpatrick, R. M., Estabrook, R., Bates, T. C., Maes, H. H., & Boker, S. M. (2015). OpenMx 2.0: Extended structural equation and statistical modeling. *Psychometrika*, 81(2), 535–549. https://doi.org/10.1007/s11336-014-9435-8
- Nielsen, S. F. (2007). Proper and improper multiple imputation. *International Statistical Review*, 71(3), 593–607. https://doi.org/10.1111/j.1751-5823.2003.tb00214.x
- Nüst, D., Eddelbuettel, D., Bennett, D., Cannoodt, R., Clark, D., Daróczi, G., Edmondson, M., Fay, C., Hughes, E., Kjeldgaard, L., Lopp, S., Marwick, B., Nolis, H., Nolis, J., Ooi, H., Ram, K., Ross, N., Shepherd, L., Sólymos, P., ... Xiao, N. (2020). The Rockerverse: Packages and applications for containerisation with R. The R Journal, 12(1), 437. https://doi.org/10.32614/rj-2020-007
- Pawitan, Y. (2013). In all likelihood: Statistical modelling and inference using likelihood. Oxford University Press.
- Pearson, E. S., & Please, N. W. (1975). Relation between the shape of population distribution and the robustness of four simple test statistics. *Biometrika*, 62(2), 223–241. https://doi.org/10.1093/biomet/62.2.223
- Pesigan, I. J. A., & Cheung, S. F. (2020a). SEM-based methods to form confidence intervals for indirect effect: Still applicable given nonnormality, under certain conditions. Frontiers in Psychology, 11. https://doi.org/10.3389/fpsyg.2020.571928
- Pesigan, I. J. A., & Cheung, S. F. (2020b). SEM-based methods to form confidence intervals for indirect effect: Still applicable given nonnormality, under certain conditions. Frontiers in Psychology, 11. https://doi.org/10.3389/fpsyg.2020.571928
- Pesigan, I. J. A., & Cheung, S. F. (2020c). SEM-based methods to form confidence intervals for indirect effect: Still applicable given nonnormality, under certain conditions. Frontiers in Psychology, 11. https://doi.org/10.3389/fpsyg.2020.571928
- Pesigan, I. J. A., & Cheung, S. F. (2023). Monte Carlo confidence intervals for the indirect effect with missing data. *Behavior Research Methods*. https://doi.org/10.3758/s13428-023-02114-4

- Pesigan, I. J. A., Sun, R. W., & Cheung, S. F. (2023a). betaDelta and betaSandwich: Confidence intervals for standardized regression coefficients in R. Multivariate Behavioral Research. https://doi.org/10.1080/00273171.2023.2201277
- Pesigan, I. J. A., Sun, R. W., & Cheung, S. F. (2023b). betaDelta and betaSandwich: Confidence intervals for standardized regression coefficients in R. Multivariate Behavioral Research. https://doi.org/10.1080/00273171.2023.2201277
- Pesigan, I. J. A., Sun, R. W., & Cheung, S. F. (2023c). betaDelta and betaSandwich: Confidence intervals for standardized regression coefficients in R. Multivariate Behavioral Research. https://doi.org/10.1080/00273171.2023.2201277
- Peugh, J. L., & Enders, C. K. (2004). Missing data in educational research: A review of reporting practices and suggestions for improvement. Review of Educational Research, 74(4), 525–556. https://doi.org/10.3102/00346543074004525
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36(4), 717–731. https://doi.org/10.3758/bf03206553
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. https://doi.org/10.3758/brm.40.3.879
- Preacher, K. J., & Selig, J. P. (2012). Advantages of Monte Carlo confidence intervals for indirect effects. Communication Methods and Measures, 6(2), 77–98. https://doi.org/10.1080/19312458.2012.679848
- R Core Team. (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing. Vienna, Austria. https://www.R-project.org/
- R Core Team. (2022). R: A language and environment for statistical computing. R Foundation for Statistical Computing. Vienna, Austria. https://www.R-project.org/
- R Core Team. (2023). R: A language and environment for statistical computing. R Foundation for Statistical Computing. Vienna, Austria. https://www.R-project.org/

- Raghunathan, T. E., Lepkowski, J. M., Hoewyk, J. V., & Solenberger, P. (2001). A multivariate technique for multiply imputing missing values using a sequence of regression models.

 Survey Methodology, 27(1), 85–95.
- Rasmussen, J. L. (1987). Estimating correlation coefficients: Bootstrap and parametric approaches.

 *Psychological Bulletin, 101(1), 136–139. https://doi.org/10.1037/0033-2909.101.1.136
- Reiter, J. P., & Raghunathan, T. E. (2007). The multiple adaptations of multiple imputation.

 Journal of the American Statistical Association, 102(480), 1462–1471. https://doi.org/10.

 1198/016214507000000932
- Robey, R. R., & Barcikowski, R. S. (1992). Type I error and the number of iterations in Monte Carlo studies of robustness. *British Journal of Mathematical and Statistical Psychology*, 45(2), 283–288. https://doi.org/10.1111/j.2044-8317.1992.tb00993.x
- Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48(2). https://doi.org/10.18637/jss.v048.i02
- Rousselet, G. A., Pernet, C. R., & Wilcox, R. R. (2021). The percentile bootstrap: A primer with step-by-step instructions in R. Advances in Methods and Practices in Psychological Science, 4(1), 1–10. https://doi.org/10.1177/2515245920911881
- Royston, P. (2004). Multiple imputation of missing values. The Stata Journal: Promoting communications on statistics and Stata, 4(3), 227–241. https://doi.org/10.1177/1536867x0400400301
- Royston, P. (2005). Multiple imputation of missing values: Update. The Stata Journal: Promoting communications on statistics and Stata, 5(2), 188–201. https://doi.org/10.1177/1536867x0500500204
- Rubin, D. B. (1976). Inference and missing data. Biometrika, 63(3), 581-592. https://doi.org/10. 1093/biomet/63.3.581
- Rubin, D. B. (1987a). Multiple imputation for nonresponse in surveys. New York, John Wiley & Sons, Inc. https://doi.org/10.1002/9780470316696
- Rubin, D. B. (1987b). Multiple imputation for nonresponse in surveys. John Wiley & Sons, Inc. https://doi.org/10.1002/9780470316696

- Rubin, D. B. (1988). An overview of multiple imputation, In Jsm proceedings, survey research methods section, Alexandria, VA, American Statistical Association. http://www.asasrms. org/Proceedings/papers/1988_016.pdf
- Rubin, D. B. (1996). Multiple imputation after 18+ years. *Journal of the American Statistical Association*, 91(434), 473–489. https://doi.org/10.1080/01621459.1996.10476908
- Rubin, D. B., & Schenker, N. (1991). Multiple imputation in health-are databases: An overview and some applications. *Statistics in Medicine*, 10(4), 585–598. https://doi.org/10.1002/sim.4780100410
- Satorra, A., & Bentler, P. M. (1994). Corrections to test statistics and standard errors in covariance structure analysis. In von Eye A. & C. C. Clogg (Eds.), *Latent variables analysis:*Applications for developmental research (pp. 399–419).
- Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika*, 66(4), 507–514. https://doi.org/10.1007/bf02296192
- Savalei, V. (2014). Understanding robust corrections in structural equation modeling. Structural Equation Modeling: A Multidisciplinary Journal, 21(1), 149–160. https://doi.org/10.1080/10705511.2013.824793
- Savalei, V., & Rosseel, Y. (2021a). Computational options for standard errors and test statistics with incomplete normal and nonnormal data in SEM. Structural Equation Modeling: A Multidisciplinary Journal, 29(2), 163–181. https://doi.org/10.1080/10705511.2021.1877548
- Savalei, V., & Rosseel, Y. (2021b). Computational options for standard errors and test statistics with incomplete normal and nonnormal data in SEM. Structural Equation Modeling: A Multidisciplinary Journal, 29(2), 163–181. https://doi.org/10.1080/10705511.2021.1877548
- Sawilowsky, S. S., & Blair, R. C. (1992). A more realistic look at the robustness and Type II error properties of the t test to departures from population normality. *Psychological Bulletin*, 111(2), 352–360. https://doi.org/10.1037/0033-2909.111.2.352
- Schafer, J. L. (1994). [multiple-imputation inferences with uncongenial sources of input]: Comment. Statistical Science, 9(4). https://doi.org/10.1214/ss/1177010271

- Schafer, J. L. (1997). Analysis of incomplete multivariate data. Chapman; Hall/CRC. https://doi.org/10.1201/9780367803025
- Schafer, J. L. (1999). Multiple imputation: A primer. Statistical Methods in Medical Research, 8(1), 3–15. https://doi.org/10.1177/096228029900800102
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7(2), 147–177. https://doi.org/10.1037/1082-989x.7.2.147
- Schafer, J. L., & Olsen, M. K. (1998a). Multiple imputation for multivariate missing-data problems:

 A data analyst's perspective. *Multivariate Behavioral Research*, 33(4), 545–571. https://doi.org/10.1207/s15327906mbr3304_5
- Schafer, J. L., & Olsen, M. K. (1998b). Multiple imputation for multivariate missing-data problems:

 A data analyst's perspective. *Multivariate Behavioral Research*, 33(4), 545–571. https://doi.org/10.1207/s15327906mbr3304_5
- Schenker, N. (1987). Better bootstrap confidence intervals: Comment. *Journal of the American Statistical Association*, 82(397), 192. https://doi.org/10.2307/2289150
- Schenker, N., & Taylor, J. M. G. (1996). Partially parametric techniques for multiple imputation.

 *Computational Statistics & Data Analysis, 22(4), 425–446. https://doi.org/10.1016/0167-9473(95)00057-7
- Schenker, N., Treiman, D. J., & Weidman, L. (1988). Multiple imputation of industry and occupation codes for public-use files, In *Jsm proceedings, survey research methods section*, Alexandria, VA, American Statistical Association. http://www.asasrms.org/Proceedings/papers/1988_017.pdf
- Schouten, R. M., Lugtig, P., & Vink, G. (2018). Generating missing values for simulation purposes:

 A multivariate amputation procedure. *Journal of Statistical Computation and Simulation*,

 88(15), 2909–2930. https://doi.org/10.1080/00949655.2018.1491577
- Schouten, R. M., & Vink, G. (2018). The dance of the mechanisms: How observed information influences the validity of missingness assumptions. Sociological Methods & Research, 50(3), 1243–1258. https://doi.org/10.1177/0049124118799376

- Selker, R., Love, J., & Dropmann, D. (2020). jmv: The 'jamovi' analyses. https://CRAN.R-project.org/package=jmv
- Serlin, R. C. (2000). Testing for robustness in Monte Carlo studies. *Psychological Methods*, 5(2), 230–240. https://doi.org/10.1037/1082-989x.5.2.230
- Serlin, R. C., & Lapsley, D. K. (1985). Rationality in psychological research: The good-enough principle. *American Psychologist*, 40(1), 73–83. https://doi.org/10.1037/0003-066x.40.1.73
- Shao, J., & Tu, D. (1995). *The jackknife and bootstrap*. New York, NY, USA, Springer Verlag. https://doi.org/10.1007/978-1-4612-0795-5
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7(4), 422–445. https://doi.org/10.1037/1082-989x.7.4.422
- Sinharay, S., Stern, H. S., & Russell, D. (2001a). The use of multiple imputation for the analysis of missing data. *Psychological Methods*, 6(4), 317–329. https://doi.org/10.1037/1082-989x.6.4.317
- Sinharay, S., Stern, H. S., & Russell, D. (2001b). The use of multiple imputation for the analysis of missing data. *Psychological Methods*, 6(4), 317–329. https://doi.org/10.1037/1082-989x.6.4.317
- Skinner, C. (1994). [multiple-imputation inferences with uncongenial sources of input]: Comment. Statistical Science, 9(4). https://doi.org/10.1214/ss/1177010272
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. Sociological Methodology, 13, 290. https://doi.org/10.2307/270723
- Sobel, M. E. (1986). Some new results on indirect effects and their standard errors in covariance structure models. *Sociological Methodology*, 16, 159. https://doi.org/10.2307/270922
- Sobel, M. E. (1987). Direct and indirect effects in linear structural equation models. Sociological Methods & Research, 16(1), 155–176. https://doi.org/10.1177/0049124187016001006
- Sterne, J. A. C., White, I. R., Carlin, J. B., Spratt, M., Royston, P., Kenward, M. G., Wood, A. M., & Carpenter, J. R. (2009). Multiple imputation for missing data in epidemiological and

- clinical research: Potential and pitfalls. BMJ, 338 (jun29 1), b2393–b2393. https://doi.org/10.1136/bmj.b2393
- Taylor, A. B., & MacKinnon, D. P. (2012). Four applications of permutation methods to testing a single-mediator model. Behavior Research Methods, 44 (3), 806–844. https://doi.org/10. 3758/s13428-011-0181-x
- Taylor, A. B., MacKinnon, D. P., & Tein, J.-Y. (2007). Tests of the three-path mediated effect. Organizational Research Methods, 11(2), 241–269. https://doi.org/10.1177/1094428107300344
- Tibshirani, R., & Leisch, F. (2019). bootstrap: Functions for the book "An introduction to the bootstrap". https://CRAN.R-project.org/package=bootstrap
- Tofighi, D., & Kelley, K. (2019). Indirect effects in sequential mediation models: Evaluating methods for hypothesis testing and confidence interval formation. *Multivariate Behavioral Research*, 55(2), 188–210. https://doi.org/10.1080/00273171.2019.1618545
- Tofighi, D., & Kelley, K. (2020). Improved inference in mediation analysis: Introducing the model-based constrained optimization procedure. *Psychological Methods*, 25, 496–515. https://doi.org/10.1037/met0000259
- Tofighi, D., & MacKinnon, D. P. (2015). Monte Carlo confidence intervals for complex functions of indirect effects. Structural Equation Modeling: A Multidisciplinary Journal, 23(2), 194–205. https://doi.org/10.1080/10705511.2015.1057284
- van Buuren, S. (2018). Flexible imputation of missing data (2nd ed.). Chapman; Hall/CRC. https://doi.org/10.1201/9780429492259
- van Buuren, S., Brand, J. P. L., Groothuis-Oudshoorn, C. G. M., & Rubin, D. B. (2006). Fully conditional specification in multivariate imputation. *Journal of Statistical Computation and Simulation*, 76(12), 1049–1064. https://doi.org/10.1080/10629360600810434
- van Buuren, S., & Groothuis-Oudshoorn, K. (2011). mice: Multivariate imputation by chained equations in R. *Journal of Statistical Software*, 45(3). https://doi.org/10.18637/jss.v045.i03
- Venables, W. N., & Ripley, B. D. (2002). Modern applied statistics with S. Springer New York. https://doi.org/10.1007/978-0-387-21706-2

- Venzon, D. J., & Moolgavkar, S. H. (1988). A method for computing profile-likelihood-based confidence intervals. Applied Statistics, 37(1), 87. https://doi.org/10.2307/2347496
- Verma, J. P., & Verma, P. (2020). Determining sample size and power in research studies. Springer Singapore. https://doi.org/10.1007/978-981-15-5204-5
- Wald, A. (1939). Contributions to the theory of statistical estimation and testing hypotheses.

 The Annals of Mathematical Statistics, 10(4), 299–326. https://doi.org/10.1214/aoms/
 1177732144
- Wald, A. (1943). Tests of statistical hypotheses concerning several parameters when the number of observations is large. Transactions of the American Mathematical Society, 54(3), 426–482. https://doi.org/10.1090/s0002-9947-1943-0012401-3
- Waller, N. G. (2022). fungible: Psychometric functions from the Waller Lab. The R Foundation. https://CRAN.R-project.org/package=fungible
- West, S. G. (2001). New approaches to missing data in psychological research: Introduction to the special section. *Psychological Methods*, 6(4), 315–316. https://doi.org/10.1037/1082-989x.6.4.315
- White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, 48(4), 817–838. https://doi.org/10.2307/1912934
- White, I. R., Royston, P., & Wood, A. M. (2010). Multiple imputation using chained equations:

 Issues and guidance for practice. Statistics in Medicine, 30(4), 377–399. https://doi.org/
 10.1002/sim.4067
- Wolfowitz, J. (1952). Abraham Wald, 1902-1950. The Annals of Mathematical Statistics, 23(1), 1–13. https://doi.org/10.1214/aoms/1177729480
- Wu, W., & Jia, F. (2013). A new procedure to test mediation with missing data through nonparametric bootstrapping and multiple imputation. *Multivariate Behavioral Research*, 48(5), 663–691. https://doi.org/10.1080/00273171.2013.816235
- Yuan, K.-H., & Bentler, P. M. (2000). Three likelihood-based methods for mean and covariance structure analysis with nonnormal missing data. Sociological Methodology, 30(1), 165–200. https://doi.org/10.1111/0081-1750.00078

- Yuan, K.-H., & Chan, W. (2011). Biases and standard errors of standardized regression coefficients.

 Psychometrika, 76(4), 670–690. https://doi.org/10.1007/s11336-011-9224-6
- Yung, Y.-F., & Bentler, P. M. (1994). Bootstrap-corrected ADF test statistics in covariance structure analysis. British Journal of Mathematical and Statistical Psychology, 47(1), 63–84. https://doi.org/10.1111/j.2044-8317.1994.tb01025.x
- Yzerbyt, V., Muller, D., Batailler, C., & Judd, C. M. (2018a). New recommendations for testing indirect effects in mediational models: The need to report and test component paths. *Journal of Personality and Social Psychology*, 115(6), 929–943. https://doi.org/10.1037/pspa0000132
- Yzerbyt, V., Muller, D., Batailler, C., & Judd, C. M. (2018b). New recommendations for testing indirect effects in mediational models: The need to report and test component paths. *Journal of Personality and Social Psychology*, 115(6), 929–943. https://doi.org/10.1037/pspa0000132
- Zaslavsky, A. M. (1994). [multiple-imputation inferences with uncongenial sources of input]: Comment: Using the full toolkit. *Statistical Science*, 9(4). https://doi.org/10.1214/ss/1177010273
- Zeileis, A. (2004). Econometric computing with HC and HAC covariance matrix estimators. *Journal of Statistical Software*, 11(10). https://doi.org/10.18637/jss.v011.i10
- Zhang, P. (2007). Multiple imputation: Theory and method. *International Statistical Review*, 71(3), 581–592. https://doi.org/10.1111/j.1751-5823.2003.tb00213.x
- Zhang, Z., & Wang, L. (2012). Methods for mediation analysis with missing data. *Psychometrika*, 78(1), 154–184. https://doi.org/10.1007/s11336-012-9301-5
- Zhang, Z., Wang, L., & Tong, X. (2015). Mediation analysis with missing data through multiple imputation and bootstrap. In *Quantitative psychology research* (pp. 341–355). Springer International Publishing. https://doi.org/10.1007/978-3-319-19977-1_24