Basic and Applied Social Psychology ›

Volume 39, 2017 - Issue 2

15,051 Views | 951 CrossRef citations to date | 6 Altmetric

Original Articles

Extracting the Variance Inflation Factor and Other Multicollinearity Diagnostics from Typical Regression Results

Christopher Glen Thompson, Rae Seon Kim, Ariel M. Aloe & Betsy Jane Becker

Pages 81-90 | Published online: 01 Feb 2017

Cite this article https://doi.org/10.1080/01973533.2016.1277529 Check for updates

Sample our Behavioral Sciences Journals
>> Sign in here to start your access to the latest two volumes for 14 days

ABSTRACT

Multicollinearity is a potential problem in all regression analyses. However, the examination of multicollinearity is rarely reported in primary studies. In this article we discuss and show several post hoc methods for assessing multicollinearity. One such multicollinearity diagnostic is the variance inflation factor. We outline the post hoc variance inflation factor method, which computes the variance inflation factor from the standardized regression coefficient and semi-partial correlation, both of which can be calculated from commonly reported regression results. Three examples of computing multicollinearity diagnostics using data from published studies are shown. We conclude with a discussion and practical implications.

Notes

Disclaimer: Due to copyediting the R code will not work properly if copied and pasted directly from the digital document. To ensure that the R code works properly, we advise users to retype it from supplementary materials.

Related research

People also read | Recommended articles | Cited by 951

Model-Dependent Variance Inflation Factor Cutoff Values

Trevor A. Craney et al.
Quality Engineering
Published online: 15 Feb 2007

Variance Inflation Factor and Condition Number in multiple linear regression

R. Salmerón et al.
Journal of Statistical Computation and Simulation
Published online: 22 Apr 2018

Number of predictors and multicollinearity: What are their effects on error and bias in regression?

Matthew Ryan Lavery et al.
Communications in Statistics - Simulation and Computation
Published online: 7 Nov 2017

View more

Information for

- Authors
- R&D professionals
- Editors
- Librarians
- Societies

Open access

- Overview
- Open journals
- Open Select
- Dove Medical Press
- F1000Research

Opportunities

- Reprints and e-prints
- Advertising solutions
- Accelerated publication
- Corporate access solutions

Help and information

- Help and contact
- Newsroom
- All journals
- Books

Keep up to date

Register to receive personalised research and resources by email

Sign me up

Copyright © 2026 Informa UK Limited Privacy policy

Cookies Terms & conditions Accessibility

Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG