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   Statistics/Data Analysis
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Quality assessment of primary studies in systematic reviews assist in

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help for **quadas**   (Ben Adarkwa Dwamena)

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quadas: Graphical depiction of quality assessment in diagnostic accuracy reviews

Syntax

> **quadas** *varlist* [**if** *exp*] [**in** *range*] [, **options** *]

```
  ___ OPTIONS _____
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> **sum** creates a figure summarizing compliance of individual studies with
> methodologic quality items (varlist) scored yes, unclear, or no

> **bar** plots a bar graph of overall frequency of compliance with
> methodologic quality items (varlist) scored yes, unclear, or no

> **color** bar or summary graph generated in color with yes=green,
> unclear=yellow and no=red.

> may use graph editor or other twoway options to edit default
> appearance.

Remarks

> Quality assessment of primary studies in systematic reviews assist in
> identifying potential sources of bias and to limit the effects of these
> biases on the estimates and the conclusions of the review. Quality
> appraisal offers a general impression of the validity of the available
> evidence. The Cochrane Diagnostic Test Accuracy Working Group
> recommends the QUADAS (Quality Assessment of Diagnostic Accuracy
> Studies) checklist to assess the quality of diagnostic test accuracy
> studies. QUADAS is a rigorously constructed and validated tool that can
> be used by investigators undertaking new systematic reviews. The QUADAS
> tool consists of 14 items that cover patient spectru ence standard,
> disease progression bias, verification and review bias, clinical review
> bias, incorporation bias, test execution, study withdrawals, and
> intermediate results.

> The results may be summarized using:

> (1) Methodological quality graph(example appended Quadas1.pdf): review
> authors' judgments about each methodological quality item for each
> included study.

> (2) Methodological quality summary(example appended Quadas2.pdf):
> review authors' judgments about each methodological quality item
> presented as percentages across all included studies

> Although not implemented in quadas, 1n the analysis phase of systematic
> review, the results of the quality appraisal may guide explorations of
> the sources of heterogeneity. Possible methods to address quality
> differences are sensitivity analysis, p analysis, or meta-regression
> analysis, although the number of included studies may often be too
> small for meaningful investigations. Also, incomplete reporting hampers
> any evaluation of study quality.

Examples

> use http://sitemaker.umich.edu/metadiagnosis/files/quadas.dta

Methodolgical Quality Graph

<u>quadas spect select ref incorp testdesc refdesc blintest blinref clin
    indeterm withdraw, bar col</u>

Methodolgical Quality Summary

<u>quadas spect select ref incorp testdesc refdesc blintest blinref clin,
    id(studid) sum col ysiz(7) xsiz(4)</u>

References

Whiting P, Rutjes AW, Reitsma JB, Bossuyt PM, Kleijnen J.   The
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diagnostic accuracy included in systematic reviews.   BMC Med Res
Methodol 2003;3:25

Leeflang MM, Deeks JJ, Gatsonis C, Bossuyt PM, Cochrane Diagnostic Test
Accuracy Working Group.   Systematic reviews of diagnostic test
accuracy.   Ann Intern Med. 2008;149(12):889-897

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comments and suggestions

Citation

quadas is not an official Stata command. It is a free contribution to
the research community, like a paper.   Suggested citation if using
quadas in published work:

Dwamena, Ben A.(2010) **quadas: A program for graphical depiction of
study quality assessment for diagnostic test accuracy reviews.**
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Michigan Medical School, Ann Arbor, Michigan.