

## 2009 International Campbell Collaboration (C2) Colloquium

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### Abstract Information

**Abstract Title:**

Evaluating Quality Assessment Methods for Systematic Review

**Format:**

Paper

**Themes:**

Methodology, Evidence

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**Abstract:**

In meta-analysis, variation in effect sizes are examined by fitting moderator models. One set of commonly used moderators relates to characteristics of the study design. While some meta-analyses use a small number of codes that characterize design features, many reviewers are beginning to use more comprehensive coding instruments to assess study quality. For example, many medical meta-analyses use the Consolidated Standard of Reporting Trials [CONSORT] as described by Begg et al. (1996). The use of these instruments, however, remains controversial. Two major questions that remain regarding quality assessment instruments are the following: (1) How reliable are the scores from quality assessment instruments? and (2) Do these items conform to their theoretical structure? This presentation will discuss the rationale for using Item Response Theory models for evaluating study quality. Two models will be discussed: the simple one-parameter IRT (Rasch) model as well as the Facets model. Additionally, this presentation will report the results of a primary study utilizing contemporary measurement theory to evaluate systematically the measurement properties of one of these coding instruments, the Study Design and Implementation Assessment Device [DIAD] (Valentine & Cooper, in press). One way to several critical research questions surrounding study quality and systematic review is to use IRT. The proposed paper will report the results of a study that collects ratings using the DIAD and then analyzes these ratings using Rasch modeling techniques. The study limitation will be discussed and future areas of investigation regarding study quality and meta-analysis will be identified.

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