

Shannon Wagner¹, Marc White², Izabela Schultz³, Rick Iverson^{4†}, Vernita Hsu⁵, Lisa McGuire⁶, Werner Schulz⁷. ¹School of Health Sciences, University of Northern British Columbia ²Canadian Institute for the Relief of Pain and Disability/ Department of Family Practice, UBC,, ³Department of Educational and Counseling Psychology and Special Education, UBC, ⁴Beedie School of Business, Simon Fraser University, ⁵BC Construction Safety Alliance, ⁶The FIOSA-MIOSA Safety Alliance of BC, ⁷Healthcare Benefit Trust. [†]This poster is dedicated to the memory of Dr. Rick Iverson who passed away suddenly May 2012.

Background

To our knowledge, no gold standard for assessing a methodologically heterogeneous systematic review of systematic reviews is available in the current literature. Consequently, as an aspect of our academic-community stakeholder driven systematic review, we developed criteria for ranking the quality of available information.

Objective

To create a systematic criteria for evaluating evidence as reported in a systematic review of systematic reviews.

Methods

Quality of independent systematic reviews was determined through quality assessment surveys completed by team researchers. A minimum of two researchers completed the survey for each review (see Table 1).

The creation of appropriate criteria was determined through team discussion, re-iteration, and consensus.

Future Research

Our academic-stakeholder team intends to complete an additional systematic review of systematic reviews; this time on the topic of return to work interventions. This additional review, as well as those completed by other researchers, will serve to evaluate the validity and applicability of our newly developed criteria.

Limitations

Our newly developed criteria demonstrated good face validity and pragmatic usefulness for evaluating evidence provided by a systematic review of systematic reviews incorporating qualitative, quantitative, and mixed-design methodologies. However, our criteria have yet to be evaluated by additional authors and for additional studies. As a result, other forms of validity for our criteria have yet to be determined.

This research was primarily supported with funds from WorkSafeBC through the FOCUS ON TOMORROW program. Additional funds were provided by Healthcare Benefits Trust.

Results

Using collaborative methods and processes of reiteration, a criteria to determine the strength of evidence provided by our systematic review of systematic reviews was created. From this process we created criteria felt to be both exclusive and exhaustive, as well as reflective of previous versions of criteria used to evaluate strength of evidence provided by systematic review. Importantly, these categories were also deemed to fit with qualitative expert opinion about the overall strength of evidence provided by the literature for each category (see Table 2).

Table 1. Methodological Quality Assessment Survey

(Quantitative Systematic Reviews) Methodological Quality Criteria and Score	Answer choices
Did the authors have a clearly focused question?	Yes=1 No= 0
Were inclusion/exclusion criteria used?	Yes = 1 No = 0 Not specified = 0
Did the authors describe a search strategy that was comprehensive and reproducible?	Yes = 1 No = 0 Not specified = 0
Please click the search strategies used.	a. Five or more databases: 2 b. Two to four databases: 1 c. One database: 0
Did search strategy cover an adequate number of years? (10+ years)	Yes = 1 No = 0
Did the review assess the methodological quality of the primary studies?	Yes = 1 No = 0
What methods did the authors use to combine or compare results across studies?	Meta-analyses = 2 Descriptive + quality weight = 2 Descriptive no weight = 1 Other = 0
How strong was the level of evidence supporting the strongest conclusions of the study?	Level 1 (RCT) = 2 Level 2 (non-random) = 1 Level 3 (uncontrolled) = 0 Unclear = 0
Does the data support the author's interpretation?	Yes, mostly = 1 No = 0
Are there any concerns related to COI?	Yes = 0 No = 1
Score	Total Score Possible 13

Table 2. Criteria for Assessing Level of Evidence

Strong Evidence
Minimum of 3 high-quality systematic review
Minimum of 2 high-quality AND 2 moderate-quality or low-quality systematic reviews
OR a minimum of 1 high-quality AND 3 or more of moderate-quality or low quality systematic reviews
Moderate Evidence
Minimum of 2 high-quality systematic review
Minimum of 1 high-quality AND 2 moderate-quality or low-quality systematic reviews
OR a minimum of 4 moderate-quality or low-quality systematic reviews
Weak Evidence
Minimum of 1 high-quality AND 1 moderate-quality or low-quality systematic review
OR a minimum of 3 moderate-quality or low-quality systematic reviews
Inconsistent
Determined by studies that did not meet the criteria for any level of evidence and had no consistent agreement in reported outcomes
Insufficient
Determined by information that was not inconsistent, but did not meet the criteria for weak evidence.