

## ABSTRACT

### **The Mixed Methods Appraisal Tool: Assessing the methodological quality of qualitative, quantitative and mixed methods studies**

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Systematic literature reviews identify, select, appraise, and synthesize relevant literature on a particular topic. Typically, reviews look at studies with similar methodology, e.g., randomized controlled trials, while interest in a new form of literature reviews, mixed studies review (MSR), is growing. In MSRs, reviewers concomitantly review qualitative, quantitative, and/or mixed methods studies. This allows reviewers to obtain in-depth answers to complex scientific research questions. However, appraising the quality of studies with different methodologies remains challenging. A pilot Mixed Methods Appraisal Tool (MMAT) has been developed at McGill (19-criteria checklist and tutorial) to concurrently appraise the methodological quality of qualitative, quantitative and mixed methods studies. The purpose of this lecture is to present the content validity and the reliability of the MMAT, and its use.

Based on a critical examination of 17 health-related systematic mixed studies reviews, an initial version of the MMAT has been proposed, and pilot tested in 2009. Based on this pilot exercise, it is anticipated that applying MMAT may take on average 15 minutes per study (hence efficient), and that the Intra-Class Correlation might be around 0.8 (hence reliable). The present 2011 revision is based on feedback from four workshops, and a comprehensive framework for assessing the quality of mixed methods research. The MMAT allows the appraisal of most common types of study methodology and design. It permits to describe the methodological quality for three methodological domains: mixed, qualitative and quantitative (subdivided into three sub-domains: randomized controlled, nonrandomized, and descriptive). Thus, using the MMAT requires experience or training in these domains. For each retained study, an overall quality score may be not informative (in comparison to a descriptive summary using MMAT criteria), but might be calculated using the MMAT.