

## Quality Assessment Tool for Quantitative Studies Method

Effective Public Health Practice Project (1998)

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National Collaborating Centre  
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## REGISTRY OF KNOWLEDGE TRANSLATION METHODS AND TOOLS FOR PUBLIC HEALTH

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**RESOURCE:** Method  
**ACTIVITY:** Knowledge Synthesis  
**STAGE:** Doing

### DESCRIPTION

The process described by Thomas, Ciliska, Dobbins, & Miccucci (2004) is a method to guide knowledge synthesis. This method discusses a standardized means of assessing study quality and developing recommendations for study findings and products, including a user manual and a “Quality Appraisal Tool For Quantitative Studies.” The method and accompanying tool is used by the Effective Public Health Practice Project (EPHPP). The EPHPP began in 1998 with funding from the Ontario Ministry of Health and Long-Term Care (MOHLTC). The goal of the project was to address the lack of high quality evidence to support public health interventions outlined in Ontario’s standards for public health known as Ontario Mandatory Health Programs and Service Guidelines (MHPSG, 1997). In order to provide high quality systematic reviews to address the public health sectors need for evidence to support practice, a standardized method was developed. The quality appraisal method requires a group of four to six experts who can facilitate a process that includes question generation, searching for literature, appraisal of the literature, data extraction, and the synthesis and dissemination of results. The EPHPP has created a current, standardized method for the systematic review of public health literature. The authors of this method do not specify theoretical frameworks or principles that led to the development of this method.

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*These summaries are written by the NCCMT to condense and to provide an overview of the resources listed in the Registry of Methods and Tools and to give suggestions for their use in a public health context. For more information on individual methods and tools included in the review, please consult the authors/developers of the original resources.*

## **RELEVANCE FOR PUBLIC HEALTH**

This method was developed for use in public health, and can be applied to articles of any public health topic area, including the promotion of family and sexual health and the prevention of chronic disease, injuries and substance misuse. Various types of public health professionals would find this tool relevant to utilize sources of high quality literature to support the decision-making process, especially when designing, implementing and evaluating public health programs and policy.

## **EVALUATION AND MEASUREMENT CHARACTERISTICS**

### **Evaluation**

Information not available

### **Validity**

Information not available

### **Reliability**

Information not available

### **Methodological Rating**

Not applicable

## **IMPLEMENTING THE TOOL**

### **Who is Involved?**

This method requires a review team of four to six members with at least one member having methodological expertise, and two members with subject expertise.

### **Time**

More than 8 hours

According to Thomas, et al. (2004), a systematic review can be completed in 7-9 months.

### **Additional Skills Needed for Implementation**

This method requires that the review team have specialized expertise in quality appraisal and public health.

## **Steps for Using Tool**

There are seven steps for using the EPHPP Quality Assessment Method. As described by Thomas et al. (2004), these steps are: 1) Question formulation - to guide the review process and provide boundaries for the searching of the literature; 2) Literature search and retrieval - at least seven electronic databases are searched with a series of terms organized around the topic of interest; 3) Determining relevance criteria - to establish unique relevance criteria including a description of the population of interest, interventions, outcomes and study design; 4) Assessment of literature for relevance and quality - independent assessment by two reviewers using established relevance criteria. Any discrepancies are resolved through discussion and consensus, with an additional person to resolve disagreement; 5) Data extraction and narrative synthesis - using strong and moderate studies and including the funding source, the number of participants per group, the number of dropouts, the target population description, the interventions, the outcomes and the length of follow-up; 6) Peer review of the report - synthesis of information and creation of a written report for peer review by five or more public health experts; and 7) Dissemination - involves active dissemination strategies in order to promote public health professionals use and uptake of the review results.

## **Conditions for Use**

A standardized approach for the assessment of qualitative research has not been completed. Currently, the EPHPP attempts to use qualitative research in order to explain and interpret the outcomes and interventions under review.

## **TOOL DEVELOPMENT**

### **Developer(s)**

The Effective Public Health Practice Project (EPHPP), McMaster University, Faculty of Health Sciences, School of Nursing. The original authors are B.H. Thomas, Associate Professor, McMaster University School of Nursing, D. Ciliska, Professor, McMaster University School of Nursing, M. Dobbins, Associate Professor, McMaster University School of Nursing, and S. Micucci, EPHPP Project Coordinator.

### **Method of Development**

The EPHPP Quality Assessment Method supports the use of the EPHPP Quality Assessment Tool. This tool was developed by reviewing available instruments in peer review literature and devising a list of components. Content validity was assessed by circulation to six experts in appraising study quality; comments were incorporated. A pilot version tested with ten primary studies by four experts in critical appraisal and community health. The tool was further clarified with feedback from the reviewers. A detailed dictionary was developed, as well as guidelines for assessing the overall strength of the articles.

## Release Date

1998

## CONTACT PERSON

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## RESOURCES

<b>Title of Primary Resource</b>	A process for systematically reviewing the literature: Providing the research evidence for public health nursing interventions.
<b>File Attachment</b>	None
<b>Web-link</b>	
<b>Reference</b>	Thomas, B.H., Ciliska, D., Dobbins, M., & Micucci, S. (2004). A process for systematically reviewing the literature: Providing the research evidence for public health nursing interventions. <i>Worldviews on Evidence-Based Nursing</i> , 1(3), 176-184.
<b>Type of Material</b>	Method - Doing synthesis
<b>Format</b>	On-line Access
<b>Cost to Access</b>	
<b>Language(s)</b>	English
<b>Conditions for Use</b>	Copyright © 2004 Worldviews on Evidence-Based Nursing

<b>Title of Supplementary Resource</b>	Quality Assessment Tool For Quantitative Studies
<b>File Attachment</b>	<a href="#">QATool.pdf</a>
<b>Web-link</b>	<a href="http://www.ehphp.ca/tools.html">http://www.ehphp.ca/tools.html</a>

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<b>Reference</b>	Effective Public Health Practice Project. (1998). <i>Quality Assessment Tool For Quantitative Studies</i> . Retrieved October 2008 from above web address. Retrieved from <a href="http://www.ehphp.ca/tools.html">http://www.ehphp.ca/tools.html</a>
<b>Type of Material</b>	Tool - Data abstraction
<b>Format</b>	On-line Access
<b>Cost to Access</b>	None
<b>Language(s)</b>	English
<b>Conditions for Use</b>	

<b>Title of Supplementary Resource</b>	Dictionary for the Effective Public Health Practice Project Quality Assessment Tool For Quantitative Studies
<b>File Attachment</b>	<a href="#">QADictionary.pdf</a>
<b>Web-link</b>	<a href="http://www.ehphp.ca/PDF/QADictionary_dec2009.pdf">http://www.ehphp.ca/PDF/QADictionary_dec2009.pdf</a>
<b>Reference</b>	Effective Public Health Practice Project. (1998). <i>Dictionary for the Effective Public Health Practice Project Quality Assessment Tool For Quantitative Studies</i> . Retrieved October 2008 from <a href="http://www.ehphp.ca/tools.html">http://www.ehphp.ca/tools.html</a>
<b>Type of Material</b>	Tool - Supplementary material
<b>Format</b>	On-line Access
<b>Cost to Access</b>	None
<b>Language(s)</b>	English
<b>Conditions for Use</b>	

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