



Medical and Health Professional Education  
Best Evidence Medical Education

## **BEME Spotlight 34**

### **Building Capacity for Education Research Among Clinical Educators in the Health Professions: A BEME (Best Evidence Medical Education) Systematic Review of the Outcomes of Interventions**

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#### **Review citation**

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#### **Review website**

<http://bemecollaboration.org/Published+Reviews/BEME+Guide+No+34/>

#### **Keywords**

Education research, Clinical Educators, Health professions, Research capacity building

#### **Headline conclusions**

While the strength of evidence remains limited by weaker study designs, most interventions designed to increase education research among clinical educators described positive outcomes in terms of learner satisfaction and behavior. Additionally, we observed positive outcomes across a broad range of health professions, with the use of multiple instructional and evaluation methods. Most studies used longitudinal program designs and experiential learning as organizing structures. Key elements for success identified through a qualitative synthesis of the nine highest quality studies included: protected time; mentorship and/or collaboration; departmental and institutional commitment and leadership; and financial support. Finally, there was increasing interest in the areas of developing supportive environments and increasing recognition for health professions education research.

#### **Background and context**

There is a growing desire for health professions educators to generate high quality education research; yet, few of them encounter the training to do so. In response, health professions faculties have increasingly been devoting resources to provide members with the skills necessary for education research. The form and impact of these efforts have not been reviewed, though such a synthesis could be useful for practice.

## Review objectives

The objectives of this systematic review were to (1) identify interventions aimed at building capacity for education research among health professions clinical educators and (2) review the outcomes of these interventions.

## Review methodology

**Search Strategy:** The search strategy used a combination of subject headings and free-text keyword searching in order to capture the main search headings of "Faculty/Education" and "Research Capacity Building Interventions" and "Research or Scholarship."

**Inclusion and Exclusion Criteria:** First, we included a population of health professions clinical educators. Second, we included those clinical educators who participated in an RCB intervention designed to address their capacity to perform health professions education research. Third, we included studies that reported outcome measures related to education research skills and/or performance at an individual, faculty or institutional level. Finally, we reported the outcomes of these interventions and categorized the studies according to the intervention type.

**Data Extraction:** Data were extracted and entered into an electronic data extraction form. The form was developed and piloted in a systematic review performed by two of the authors (Hartling et al. 2010) and further revised and tailored to the current review. One reviewer extracted data and to ensure accuracy and consistency a 20% sample of the articles was randomly selected for extraction by a second reviewer.

**Data Synthesis:** We conducted a qualitative synthesis of the evidence, using procedures outlined by Ogawa and Malen (1991) for synthesizing heterogeneous bodies of literature. We first divided the studies by intervention type and then further identified the following constructs by which we evaluated and compared studies: participant group, study design, type of outcome (according to modified Kirkpatrick framework) and quality assessment scores. Meta-analysis was not performed because of substantial heterogeneity across study design, intervention type, and due to insufficient reporting of data at the study level.

## Implications for practice

1. Positive learner satisfaction and behaviour outcomes were common amongst all interventions, suggesting that many intervention types could be of benefit.
2. (1) Protected time, (2) mentorship and/or collaboration, (3) departmental and institutional commitment and leadership and (4) financial support were noted to be key elements amongst interventions.
3. Evaluating clinical educators' health professions research activities and the interventions used to promote education research is complex and subject to many variables (e.g. high motivation to succeed regardless of intervention type).
4. We discuss recommendations and potential strategies for improving participation in and quality of health professions education research based on our analysis and review of related literature in this evolving area.

## References

- Hartling L, Spooner C, Tjosvold L, & Oswald A. 2010. Problem-based learning in pre-clinical medical education: 22 years of outcome research. *Med Teach* 32(1):28–35.
- Ogawa RT & Malen B. 1991. Towards Rigor in Reviews of Multivocal Literatures: Applying the Exploratory Case Study Method. *Rev Educ Res* 61(3):265–286.