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Educational Interventions for Culturally Competent Healthcare: Developing a Protocol to Conduct a Systematic Review of the Rationale, Content, Teaching Methods, and Measures of Effectiveness

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Abstract

Educational programs in cultural competence have become an important strategy to prepare healthcare providers to better address the needs of an increasingly diverse society and to decrease health disparities. However, a literature review found little information on best practices in teaching cultural competence.

Objective: To create a protocol for conducting an effectiveness review of the literature to evaluate best practices in teaching methods, assessment, and interventions in cultural competence for health-related professions.

Methods: The protocol followed guidelines from the BEME (Best Evidence Medical Education) collaborative. Inclusion criteria, preliminary terms, and databases for searching were established. A modified version of the 6 QUESTS and the Kirkpatrick model were chosen to appraise and synthesize the information from studies included in the review. Finally, recommendations and the final report follow the adapted PRISMA (preferred reporting items for systematic reviews and meta-analyses) checklist.

Conclusions: Policymakers, researchers, and teachers can use the evidence from a comprehensive systematic review to revise or develop educational interventions, assessment methods, and accreditation requirements for academic programs.

Keywords

Best Practices; Cultural Competence; Culturally Competent Healthcare; Educational Interventions; Healthcare Professions; Research Protocol

INTRODUCTION

Changes in population demographics indicate that nations are becoming more diverse: multicultural, multilingual, and multiracial. For example, by 2060, the US population will be considerably older and more racially and ethnically diverse than it is today (US Census

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Bureau, 2012a, 2012b). In 2043, it is projected to become a majority-minority nation for the first time; that is, no group will make up a majority. By 2060, Hispanics, Blacks and Asians will comprise 57 percent (US Census Bureau, 2012a, 2012b). By the same year, the European Union (EU) population is likely to be fewer, older, and multicultural (Lanzieri, 2011). Migration has been the main driver of its recent population growth and will account for 65 percent of the increase from 2008–2060, with a 16 percent increase in persons with a foreign background by 2061 (Lanzieri, 2011).

Increasing diversity requires the adoption of transnational and transcultural approaches to transform healthcare systems. Providers must consider patients' cultural, linguistic, religious, sexual, and racial/ethnic characteristics as integral components of healthcare delivery. In fact, research has shown that healthcare professionals' biases and stereotypes about patients' cultural, racial, and linguistic differences obstruct patients' understanding of, and adherence to, provider recommendations and optimal health outcomes (Levy, Like, & Shabsin, 2009; Smedley, Stith, & Nelson, 2002).

Consequently, educational programs in cultural competence have become an important strategy for preparing healthcare providers to acknowledge and better address the needs of the increasingly diverse society and to decrease health disparities (US Department of Health and Human Services [DHHS] Office of Minority Health, 2015; World Federation for Medical Education, 2012). These initiatives involve an extensive overhaul of curricula and methods of teaching, training, and communication. National governments, organizations, agencies, and groups worldwide have recognized the importance of integrating cultural competence with healthcare (New Zealand Ministry of Health, 2014; Sairanen et al., 2012; US DHHS, 2010), and academic accreditation agencies worldwide are mandating that health-related professions include cultural competence education. For example, the World Federation for Medical Education (WFME) Global Standards for Quality Improvement (2012), endorsed by the World Health Organization (WHO), include cultural competence. In the United States, the Liaison Committee on Medical Education (LCME, 2013) requires medical schools to provide education related to behavioral and socioeconomic subjects, diversity, and cultural competence in healthcare and professionalism. Similarly, the Accreditation Council for Graduate Medical Education (ACGME, 2013) requires all residents to demonstrate interpersonal and communication skills that result in the effective exchange of information with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds. Several groups, including the Association of American Medical Colleges (AAMC, 2009) and the Commission to End Health Care Disparities (CEHCD, 2009), a partnership between the National Medical Association (NMA) and the American Medical Association (AMA), recommend continued diversity training for practicing physicians throughout their careers.

Other health professions have followed suit, including the American Association of Colleges of Nursing (AACN, 2008) and the Accreditation Council for Pharmacy Education (ACPE, 2016) in the United States, Great Britain's General Pharmaceutical Council (2011), and the Expert Panel for Global Nursing and Health and Transcultural Nursing Society compilation of standards from over fifty nursing organizations around the world (Douglas et al., 2011). The Culturally Competent in Medical Education (C2ME) initiative, sponsored by the

European Union, works across eleven countries to identify their training needs (Hudelson et al., 2016).

LITERATURE REVIEW

While more and more accrediting bodies are incorporating cultural competence in their standards, research to determine 1) the rationale for its inclusion in academic healthcare curricula, 2) the most effective teaching methods and content for improving learners' attitudes, knowledge, skills, and behaviors, and 3) how to measure the effectiveness of these initiatives is lacking (Beach et al., 2005). Although many studies report the results of educational interventions to increase cultural competence, only a few systematic reviews substantiate their impact. Aspegren(1999)examined the teaching and learning of communication skills in medicine, clearly important for culturally competent healthcare, and concluded that quality of the evidence was limited. Beach and colleagues (2005) focused on the effectiveness and costs of cultural competence training and found some evidence that it may improve knowledge, attitudes, and skills. Other research groups found processes that can help staff develop cultural competence; one integrated training with in-service programs; another linked with outside organizations for training (Pearson et al., 2007) and another one developed culturally competent practices in the workplace (Registered Nurses' Association of Ontario, 2007). Gozu and colleagues (2007) completed a systematic review of studies that used self-administered instruments to measure the cultural competence of health professionals and concluded that most used tools had not been validated. More recently, Lin and colleagues (2016) found that assessment instruments measured many different cultural dimensions and aspects of cultural competence and concluded that their reliability and validity also varied.

Considering that culturally competent care aims to improve patient outcomes and decrease health disparities, four reviews analyzed the evidence for a direct link between provider cultural competence training and patient outcomes. Lie and colleagues (2010) updated Beach's review and after selecting seven studies, concluded that 1) study quality was low to moderate; and 2) research showing a positive relationship is limited. A more recent Cochrane Collaboration review focused on randomized control trials (RCTs of educational interventions to increase health professionals' cultural competence and improve the health outcomes of patients of minority cultural and linguistic backgrounds (Horvat, Horey, Romios, & Kis-Rigo, 2014). They identified only five RCTs and found little evidence of improvement for each health outcome analyzed. Truong, Paradies and Priest (2014) reviewed systematic reviews of cultural competence interventions in healthcare settings (e.g., hospitals and community health centers) and found moderate evidence of improvement in provider outcomes and healthcare access and use and weaker evidence for improved patient outcomes. Gallagher and Polanin (2015) examined cultural competence interventions for nurses and nursing students and found uneven effectiveness due to variations in measuring the primary outcome and other aspects. Interventions that included a control group did not produce a significant change, while pre/post interventions did. Consistent with other systematic reviews, Clifford and colleagues (2015) found limited evidence that interventions improved cultural competence in caring for indigenous peoples due to methodological problems.

In summary, current reviews have not reported the best strategies to teach culturally competent care nor demonstrated that they improve the cultural competence of healthcare providers. The reviews of Aspegren (1999), Beach et al. (2005), and Gozu et al. (2007) should be updated. While Aspegren focused only on communication skills, Beach focused only on studies of pre/post or control-group interventions conducted from 1980 to 2003, and Gozu limited the search to articles in English published between 1980 and 2003 on studies using self-administrated tools to measure the effectiveness of cultural competence curricula. Although the reviews of Lie et al. (2010), Hovart et al. (2014), Truong et al. (2014), Gallagher and Polanin (2015), and Clifford et al. (2015) are recent, they focus on the evidence that cultural competence training affects patients' outcomes and/or interventions in health settings. Few have reported on health professions students, and some focus on a single health profession. Many recently published studies, such as those on pharmacy, could yield valuable evidence on health professions not examined by other systematic reviews.

The increasing interest in implementing curricula on cultural competence in healthcare-related professions, the proliferation of studies using a vast range of educational interventions, and the lack of comprehensive reviews on the topic support the need for an extensive, systematic review that collects, presents, and synthesizes the best available evidence, so educators can make informed choices on the right curriculum for providing culturally competent care.

DEVELOPING A RESEARCH PROTOCOL FOR THE SYSTEMATIC REVIEW

The objective of a systematic review is to collate all relevant evidence to answer a specific research question. In order to provide reliable findings, make sound conclusions, and minimize bias in the identification, selection, synthesis, and summary of studies included in the review, eligibility criteria and assessment methods must be specified in advance (Shamseer et al., 2015). Below, we summarize the key characteristics of a systematic review that should be clearly included in the protocol as well as the methodological and analytical approach that should follow.

OBJECTIVES:

Our review aims to identify the best, evidence-based educational interventions to improve current and future healthcare professionals' ability to provide culturally competent healthcare for patients of different races/ethnicities, origins/ancestries, and cultures. It will focus on the rationale for their inclusion in health professions curricula; their learning objectives and content; teaching methods; and measures of effectiveness used to assess learning. Table 1 lists the specific aims and research questions that inform the review.

METHODOLOGY:

The methodology outlined below was created from an extensive review of the systematic protocols cited below as well as the BEME (2015) systematic review process.

Defining the team: The review should be conducted by an interprofessional (PhDs, MDs, and PharmDs) and multi-institutional team of national or international experts on the topic,

who should have ample experience teaching cultural competence. The team should also include research librarians who are experts in the search process. All members should be trained in the study protocol. Meetings and/or conference calls should be held to go over the study protocol and assessment forms and to show examples of article retrieval and assessment using the protocol. Project leaders should coordinate the review and be able to answer any question, resolve conflicts, and address any issue that might arise during the review process. Periodic conference calls during the review process should be scheduled to identify and manage any concerns or questions.

Pilot-testing the protocol: Before implementation, the protocol should be tested to identify and correct any inconsistencies and misunderstandings. Each team member should follow the protocol to review at least three documents representing different types of research studies. The team should then discuss any problems identified and define needed changes in the templates and/or process.

Study selection criteria: Following prior reviews (Haig & Dozier, 2003a, 2003b; Hammick, Dorman, & Steinert, 2010) we recommend using only peer-reviewed studies reporting results on educational initiatives targeting students, residents, and providers in healthcare-related professions. The educational initiative should focus on increasing participants' level of competence regarding race/ethnicity, origin/ancestry, and/or culture to decrease health disparities and/or improve patients' healthcare. A key component of a systematic review is clearly defining the criteria that will be used to select the studies included; we explain ours below (Table 2). Inclusion criteria should be broad to inform educators in a variety of global settings.

Time-span: Including studies reported since 2000 is recommended; at that time, most of the healthcare professions began to incorporate cultural competence into their curricula and publish results regarding the interventions (O'Connell et al., 2013). For example, a pilot search conducted in PUBMED ("cultural competence" AND "educational intervention" AND pharmacy OR medicine OR nursing) yielded 607 articles published from 2000–2015. Older studies should be included only in exceptional cases and only if their quality or importance is deemed high.

Target population: The review should focus on medicine, nursing, and pharmacy. Nursing and mental health professionals have been the pioneers in cultural competence education, followed by general physicians and, later, pharmacists. However, the review could be extended to other healthcare-related professions implementing curricula in cultural competence, such as dentistry, allied health, and psychology, if information from the other professions is insufficient. The review should consider evidence on educational interventions for current and future healthcare professionals (students, residents, and providers) at all training levels from undergraduate to postgraduate and continuing professional education. Retrieved studies must be classified by profession. An "interprofessional" group should be created for studies targeting several professions.

Intervention, study and publication types: All peer-reviewed studies describing educational interventions to improve learners' cultural competence should be included

regardless of the learning outcomes (stated or implicit), research methods, and type of assessment used (quantitative and/or qualitative). Retrieved studies should be assessed on their 1) teaching methods, 2) educational content, 3) learning objectives, 4) research design, 5) assessment methods and 6) instructional resources used. Studies describing interventions that are not educational should be excluded.

Topics: Considering the growth of “super-diverse” societies (multiracial, multiethnic, multilingual, and multicultural) all around the world, cultural competence has become a very wide field. Based on the results of a preliminary literature review (O’Connell et al., 2013), studies should be limited to educational interventions that focus on three main characteristics of diversity: race/ethnicity, origin/ancestry, and culture. These interrelated terms are difficult to define and differentiate (Ali-Khan, Krakowski, Tahir, & Daar, 2011; Morning, 2005; Son, 2012).

Language and geography: No geographical restrictions should be applied. Although keyword searches are performed mostly in English, no further language restrictions should be applied, as cultural competence is a global concern.

Search sources and strategies: Following prior reviews (Haig & Dozier, 2003a, 2003b; Hammick et al., 2010), all published studies that meet inclusion criteria should be included. A comprehensive set of databases should be searched to identify all relevant literature consistently. Some to consider are MEDLINE (OvidSP); PubMed; Europe-PubMed Central; Cochrane Central Register of Controlled Trials (Cochrane Library); EMBASE (OvidSP); CINAHL (EbscoHOST); PsycINFO (OvidSP); Proquest Dissertations and Theses; ERIC; Sociological Abstracts; LILACS; the Campbell Library; Current Contents Connect (Thomson Reuters); AustRom (RMIT Publishing); Science Citation Index; and MedEdPortal.

To be sure all relevant sources are retrieved, scan the references in articles already identified and perform backward and forward citation searches. The “grey literature” (i.e., conference proceedings, newsletters, theses) should also be searched, using search engines, such as Google Scholar, to identify studies published in the websites of federal organizations, universities, academic organizations, and centers fostering culturally competent care for diverse and minority populations. Grey literature should undergo the same rigorous evaluation to determine inclusion. Hand searches of relevant journals (e.g., education and cultural competence/health disparities journals) should be considered to find articles that might have been missed by electronic searches.

Defining key search terms and Boolean operators, such as those outlined in Table 2, is important when creating a systematic review search strategy. Research librarians at the respective universities must inform the search process and recommend other databases, keywords, and terms to be included in the controlled vocabulary (thesaurus) used in each database. Key terms from retrieved articles should be revised and/or added to complement the list (Table 3). Advanced search options and aids available in databases (e.g., truncation, wildcard, and Boolean operators) should be strategically used. The comprehensive list of search strategies and terms should be compiled and included in the final report.

Search process: The team, including the research librarians, should conduct the search for articles following the protocol and using the databases and search terms identified above as well as additional identified keywords and MESH terms when available. All full-text articles obtained during the search should be registered and stored in an easily retrieved format like Word or pdf, using reference manager software such as EndNote or RefWorks. Documents in other formats should be scanned and/or saved as a pdf. Data about the search process should be recorded, including the number of articles 1) retrieved from database searches, 2) retrieved from secondary screenings, grey literature, and hand searches, 3) excluded after applying inclusion/exclusion criteria, and 4) reviewed.

Data extraction: A study inventory form has to be completed for each article retrieved. To minimize bias, two reviewers independently read the full text, make blinded assessments for inclusion/exclusion, and complete an article-screening checklist. Excluded studies must be registered along with the reasons for exclusion. Any disagreement about inclusion/exclusion is resolved by a third reviewer. To ensure consistency, a fourth team member randomly selects three studies and assesses them for inclusion/exclusion. Calculating Cohen's kappa coefficient (k) is recommended to measure the agreement between raters. As outlined in prior reviews (Hammick et al., 2010; Higgins & Green 2011), each article included should be analyzed in detail, and relevant methodological data extracted and registered in a form.

Study appraisal: All studies (quantitative and/or qualitative) that meet the inclusion criteria should be classified according to their purpose (description, justification, or clarification) (Cook, Bordage, & Schmidt 2008). A version of the 6 QUESTS dimensions (Harden, Grant, Buckley, & Hart, 1999), modified to include qualitative assessments (Sullivan, 2011), may be used to grade the evidence regarding 6 different factors (Quality, Utility, Extent, Strength, the Target or outcomes measured, and the Setting or context) (see Table 4). Again, two reviewers should blindly and independently classify and appraise the articles for evidence regarding the QUESTS dimensions and complete a form. Disagreements should be resolved by discussion with a third reviewer and, if still unresolved, after contacting the authors. A fourth reviewer should randomly select, review, and assess five studies to ensure consistency in coding. Cohen's kappa coefficient (k) should also be calculated in this step.

Synthesis of evidence (where is the discussion of applying the evidence?)

What do you mean?: In this step, the outcome of each study (quantitative and/or qualitative) is assessed using a modified Kirkpatrick model (Barr et al., 2000, Hammick et al., 2010; Tochel et al., 2009). Table 5 presents the model. Following Barrett and colleagues' review (2014), level 3 (change in behavior) has been modified to distinguish between self-reported and observed behavior. As in the previous steps, two reviewers blindly and independently evaluate the educational outcomes of each study, and disagreements are resolved by a third reviewer, while a fourth reviewer randomly selects, reviews, and assesses five studies to ensure consistency in coding. Cohen's kappa coefficient (k) is calculated.

The proposed review is expected to be more descriptive than quantitative, given the quantity and type of literature available. Themes/content will be analyzed for each article (Bearman & Dawson, 2013), focusing more on answering the research questions (Table 1)

than statistical measures of effectiveness. Included studies, quantitative and/or qualitative, will be grouped according to their purpose, QUESTS scores, and Kirkpatrick rating, and special attention will be paid to any conflicts (tensions) between the QUESTS dimensions: quality vs relevance, quality vs validity, utility vs setting and context (Harden et al., 1999). Comparisons across targeted profession (medicine, nursing, pharmacy, interprofessional), learning outcomes (awareness, attitudes, knowledge, skills, behavior), and type of instruction (lecture, workshop, group discussion, team-based learning, experiential) should be presented. Studies may be also classified according to their research methods, the instructional resources used in the teaching intervention examined, and the type of assessment used to measure learning.

Evidence-grading and final recommendations: The evidence will be graded using a modified version of the model outlined by Beach and colleagues (2005; see Table 6). Based on these findings, final recommendations will be presented to provide healthcare professional educators with best practices for incorporating educational content related to race/ethnicity, origins/ancestry, and culture in their curricula.

The structure of the final report may follow the adapted PRISMA checklist (Liberati et al., 2009; Moher et al., 2009), which includes a summary of the evidence, strengths and limitations of the studies selected, and the main characteristics of identified best practices as well as the limitations of the review, recommendations for future research, and conclusions. A table summarizing the studies should include author/date, sample type (student, resident, professional), profession, sample size, study purpose, study design, QUESTS rating, Kirkpatrick model rating, major findings, and other relevant information.

Conclusions

A comprehensive, systematic, up-to-date (covering 2000–2016) review of educational interventions in cultural competence for the healthcare professions is needed to assess their rationale, teaching methods, content, and effectiveness for both learners and patients. No such review exists. Its results could be used by policymakers, researchers, and teachers to inform decisions related to the revision and/or development of educational interventions and assessment methods as well as the accreditation requirements of academic programs.

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Table 1.

Specific Aims and Research Questions

Aims	Research Questions
1. Rationale: To examine the rationale for including racial/ethnic, origin/ancestry, and culture-specific content in health professions curricula	a) Why should this content be incorporated into a curriculum (e.g., national or institutional policies, guidelines, local population demographics, and/or health disparities)? b) Is the incorporation required or elective, and why?
2. Content: To examine the racial/ethnic, origin/ancestry, and culture-specific content incorporated in health professions curricula	a) What is being taught? b) What is the depth (number of hours/ credits) of the content? c) Is the content introductory, reinforcement, or mastery-level?
3. Teaching methods: To evaluate the various methods and resources used in teaching the racial/ethnic, origin/ancestry, and culture-specific content in the health professions curriculum	a) What pedagogical approach(es) is/are used? b) What is the role of the educator in the process? c) What kind of teaching resources are used?
4. Measures of effectiveness: To evaluate the various methods used to assess the achievement of teaching objectives and learning outcomes that result from incorporating racial/ethnic, origin/ancestry, and culture-specific content in health professions curricula	a) How are the teaching methods assessed? b) What changes in students' competence (awareness, knowledge, attitudes, skills, and/or behaviors) have been demonstrated in the short-term (same semester) and long-term (one year or longer)? c) What changes in patient outcomes have been demonstrated (short-term and long-term)?

Table 2.

Study Selection Criteria

Criteria Year of Publication	Inclusion 2000–2015	Exclusion
Target population	Students, residents, and providers in healthcare-related professions providing direct patient contact, such as medicine, nursing, pharmacy, dentistry, psychology, and allied health	Health-related professions not focused on direct patient contact, such as public health, environmental health, or health informatics
Type of publication	Any peer-reviewed study, whether in databases or the grey literature	Opinion papers
Study types	Any	Interventions that do not explicitly state cultural competence as a desired outcome
Educational interventions	Studies describing educational interventions designed to improve learners' cultural competence	
Type of educational intervention	Any	
Topics	Race/ethnicity origin/ancestry culture	Any other topic related to cultural competence, such as sex, gender, age, sexual orientation, disability, religion, or language
Language	Any	
Geographic location	Any	

Table 3.

Search Terms

Intervention AND	Cultural Competence AND	Healthcare Professionals AND	Learner
Curriculum/Curricula	Cultural competency	Medicine/Medical	Provider
Program/Training	Cultural sensitivity	Doctor(s) Physician(s)	Resident
Education/Educational Intervention(s)	Intercultural competence(s) Culture/Cultural	Pharmacy/Pharmacist(s) Pharmacologist(s)	Student
Continuing Education/CE	Intercultural/Cross-cultural	Nursing/Nurse(s)	
Course/Lecture/Workshop	Multicultural/Transcultural	Allied Health/Allied health professions	
Teaching/Learning	Ethnicity/Ethnic	Dental/ Dentist	
Activity/Promotion	Race/Racial	Dentistry	
Cultural immersion	Origin/Ancestry/Nationality		
International experience	Minority/Minorities	Healthcare academic programs	
Professional practice	Underserved population(s)	Mental health/Psychology	

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Table 4.

Modified QUESTS (Harden, Grant, Buckley, & Hart, 1999; Sullivan, 2011) Appraisal

QUESTS dimensions	Not stated=0	Poor=1	Good=2	High=3
Quality: how reliable is the evidence?	Not possible to identify	Evidence based on professional judgment, case studies, individual experience, or educational principles	Evidence based on consensus views built on experience (committees/task force), comparable studies in other areas, or well-designed non-experimental studies	Evidence based on well-designed quasi-experimental (pre/post, case/control) or controlled studies (treatment/control groups)
Utility: to what extent (time, cost, resources, flexibility, effort) can the method be transferred and adopted without modification?	Not possible to identify	Very difficult	Some difficulty	Easily
Extent: What is the magnitude of the evidence?	Not possible to identify	Single, isolated study	Interinstitutional, interprofessional study	Combination of several studies (meta-analysis, review)
Strength: How strong is the evidence?	Not possible to identify, no clear conclusions can be drawn	Most differences are of slight significance ($p < .1$), OR ambiguous, may represent a trend	Most differences are significant ($p < .05$) OR conclusions can be based on the results	Most differences are highly significant ($p < .001$) OR results are unequivocal
Target or outcomes measured: What educational outcomes are measured?	Not possible to identify. Reports only on participation in the intervention (number of participants)	Learners' reactions to the intervention (self-reports of learning) – Kirkpatrick level 1	Learning gains (assessments of change in skills, knowledge, abilities, attitudes, behaviors) – Kirkpatrick levels 2 and 3	Impact of intervention on healthcare delivery (assessment of provider performance, patient satisfaction and outcomes) – Kirkpatrick level 4
Setting or context: How relevant or applicable is the evidence to healthcare-related practice	Not possible to identify	Not at all	A little	Very
Maximum total of points	0	6	12	18

Table 5.

Modified Kirkpatrick Framework of Educational Outcomes (Barrett et al., 2014)

Kirkpatrick Rating	Description
Level 1 - learners' reaction to the educational intervention	All studies that include assessments of learners' views of their own learning experience and/or satisfaction with the educational intervention.
Level 2a - change of attitudes/perceptions	All studies that include assessments of learners' change in attitudes or perceptions from the educational experience.
Level 2b - change of knowledge and/or skills	All studies that include assessments of learners' change in knowledge (concepts, rationale, and principles of cultural competence) or skills (intercultural communication, patient interviewing, and treatment negotiation) from the educational experience.
Level 3a - self-reported behavioral change	All studies that include learners' self-reported change in behavior (applying knowledge and skills) based on the educational experience.
Level 3b - observed behavioral change	All studies that include assessments of observed changes in learners' behavior (applying knowledge and skills) based on the educational experience.
Level 4a - changes in professional practice	All studies that assess how educational experiences led to changes in care delivery or healthcare practice.
Level 4b - benefits to patients	All studies that assess how patients benefited directly from the educational experience.

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Table 6.

Evidence Grading (Beach et al., 2005)

Grade	Quality Criteria	Quantity Criteria	Consistency Criteria
A	At least 1 RCT	At least 1 RCT	At least 1 RCT
B	At least 75 percent used an objective assessment method	At least 75 percent used an objective assessment method	At least 75 percent used an objective assessment method
C	No controlled trial; at least 50 percent used an objective assessment method	At least 2 studies	Inconsistent
D	No controlled trial; less than 50 percent used an objective assessment method	At least 1 study	Not enough studies to determine

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