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Why you should read this article:

- To understand a collaborative learning model for developing ‘training the trainer’ courses
- To assist to develop training programmes on indigenising systematic reviews to local contexts
- To gain insights into adult learning and teaching strategies

Indigenising systematic reviews with a collaborative model of ‘training the trainers’

Preethy D’Souza, Baby Nayak, Bhumika TV et al

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Abstract

Background Developing a workforce with the skills to produce and make judicious use of evidence for policy and practice decisions requires trainers who can tailor evidence and training to policy and practice priorities.

Aim To describe how a collaborative learning model adapted a systematic review course to suit Indian nurse educators and research scholars in the conduct and use of systematic reviews.

Discussion A collaborative learning team of academics and research scholars brought together expertise in nursing education in India, and evidence synthesis in India and the UK. Participants found the course was highly beneficial, enhanced independent and critical thinking, and instilled them with the confidence and skills to deliver such courses to Indian researchers, nurses and other healthcare professionals.

Conclusion Contextualising materials and methods to participants’ experiences made learning more relatable. The use of adult learning approaches enabled participants to apply the same approaches when leading training in their own institutions and underpinned long-term sustainable working relationships between facilitators and learners, leading to new studies and new resources to support evidence-informed decision-making.

Implications for practice An educational intervention on ‘indigenising systematic reviews’ with online collaborative learning can produce improvements in the knowledge and skills of participants. Advantages of this educational approach include its flexibility, active involvement of participants and sustainable partnership building. The principles and methods used could be replicated in any setting to train trainers.

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Keywords

clinical guidelines, course evaluation, culture, diversity, education, educational methods, evidence-based practice, nursing care, practice learning, research, systematic review, transcultural care, training, universities

Key points

- *Contextualising systematic review evidence is vital to promote evidence-based practice*
- *This article describes a collaborative learning framework used for 'training the trainers' in indigenising systematic reviews*
- *The teams involved in this learning exercise benefited by working together and engaging in co-production activities*

Introduction

The value of evidence-based practice (EBP) is widely recognised by health professionals (Melnyk et al 2014, Melnyk and Fineout-Overholt 2019). EBP requires timely access to high-quality research evidence that is relevant to the context in which it will be applied (Oliver et al 2014), researchers who can produce evidence that takes context into account and decision-makers who can appraise its relevance to their areas of responsibility. This, in turn, requires people who can train researchers and decision-makers in these methods.

An opportunity to address these challenges came from the Scheme for Promotion of Academic and Research Collaboration (SPARC) – an Indian government scheme for assisting international collaborations in solving problems of national and/or international relevance. SPARC supported us in convening a team of academics from Manipal College of Nursing (MCON), Public Health Evidence South Asia (PHESA), Manipal Academy of Higher Education (MAHE) and University College London's (UCL) EPPI Centre to develop a course to train people to engage Indian nurses and other health professionals in the conduct or use of systematic reviews.

Background

Tutoring for self-directed learning and longer-term mentoring are among the most effective educational interventions for increasing nurses' skills in EBP (Portela Dos Santos et al 2022). 'Training the trainers' programmes for qualified health and social care professionals can increase knowledge, improve clinical behaviour and provide better patient outcomes, particularly if they use a blended learning approach that combines group discussion, didactic teaching and digital resources for individual learning (Pearce et al 2012).

Training nurse educators in the conduct and use of systematic reviews can improve their knowledge, attitudes, practice and competency (D'Souza et al 2021). Training longer term mentors is effective in developing mentors' EBP skills (Spiva et al 2017). EBP mentor development programmes can lead to improvements in patient safety and clinicians' EBP beliefs, practices and abilities; this provides firm justification for investing in such programmes (Alves 2021). However, developing a competent cadre of EBP mentors also requires nurses to have sufficient time and organisational support (Wang et al 2021).

Generally, in 'training the trainers' approaches, numerous trainers deliver the same course simultaneously, giving new participants opportunities to observe experienced trainers' techniques, complete the exercises and then practise instructing parts of the course to other participants.

Some authors have emphasised the role of nurse educators in integrating EBP into nursing curricula in meaningful ways (Hung et al 2015, Sin and Bliquez 2017). This aligns with the EPPI Centre's track record of working collaboratively with

stakeholders to produce and use systematic reviews for policy decisions. We therefore adopted a collaborative learning model to develop the course content and learning activities. Our aim was to generate a pool of qualified EBP instructors who would then be able to teach others about conducting and indigenising systematic reviews. We anticipated they would subsequently mentor others in conducting and indigenising systematic reviews.

Method

Course design

Our collaborative learning team of academics and research scholars combined expertise in nursing education (MCON and MAHE) and synthesising evidence (PHESA, MAHE and the EPPI Centre). The team designed a ‘training the trainers’ course inspired by research into how adults learn, the value of mentoring, reinforcing skills through practical application at work and online learning (Langer et al 2016).

We rapidly assessed our team to identify any learning needs deserving additional emphasis. We found the MAHE team was familiar with systematic review methodology but wanted to understand better how to translate global evidence to local contexts. We also needed to clarify various concepts, find relevance and meaning for India, and explore local resources.

Two studies support the wider significance of these learning needs: Ziam et al’s (2021) systematic review, which found that identifying relevant information and contextualising evidence are essential skills in making evidence-informed policy decisions; and Chambers et al’s (2018) reflexive scoping review conducted by a team of Canadian researchers of colonial and indigenous heritages, which identified mismatches between ways of knowing, concepts and language, and relationships with literature and beyond.

UCL has an established MSc module in evidence for decision-making that was developed by a leading centre. The UCL team adapted this module to train MAHE’s trainers, paying attention when designing the course to: developing culturally relevant course content; the choice of online platform to support distance learning; theories about how adults learn; and evaluation that supports as well as assesses learning.

We used Fellner’s (2018) framework for decolonising and indigenising an existing curriculum and modified it, deconstructing the content to be relevant to India while retaining the principles of systematic review in the original curriculum and using local resources and knowledge. We also used Root et al’s (2019)s co-learning principles and a reflexive approach to indigenise and decolonise the content (Schmidt 2019) by considering its importance in Indian contexts.

The UCL team offered the new course across ten weeks. The curriculum introduced the core principles underlying systematic approaches to reviewing a body of research. It also looked at the ways in which systematic reviews vary – from different purposes and types of research questions to methods for synthesising and **presenting the findings of quantitative or research** [Q1 This doesn’t read. Is there a dropped word?]. Participants learned about tools that can assist in producing reviews as well as how to apply review methods to formulate review questions, identify research using bibliographic databases, classify and appraise studies, and plan syntheses of research findings.

Discussion explored the challenges encountered when designing and planning systematic reviews. This considered the Indian context through a worked example that investigated the effectiveness of school-based interventions in improving mental health in young people and explored young people’s views and experiences of school-based mental health interventions. The MAHE team worked alongside the UCL team to develop a context-specific review question and identify applicable relevant studies from India.

The course activities included required and optional reading, work in small groups, weekly discussions, feedback of activities, hands-on training and bite-sized teaching materials. We made the course more relevant by emphasising research and systematic reviews about India or by Indian authors, qualitative synthesis, and using databases and software available in India to produce systematic reviews. Table 1 provides further details of the course’s content.

Week	Title	Review methods content	Learning activities
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1	Introducing systematic reviews	Components and principles of systematic reviews Comparing systematic reviews and other forms of literature review Different types of systematic review Benefits of conducting or using systematic reviews to inform policy and practice	Small groups explored the use and value of systematic reviews to inform policy and practice in India The groups also looked at the use of systematic review evidence in India's National Health Programs (NHPs) as well as the types of reviews commissioned by research and governmental organisations
2	Formulating review questions	How to identify research and review questions relevant to India How do the review questions vary in the Indian context? How to formulate review questions relevant to the Indian context Identify published reviews from Indian researchers – preferably reviews with different types of questions and scopes	A brainstorming session on identifying research relevant to India Groups discussed and critically reflected on how to formulate questions and set priorities
3	Systematic approaches to identifying relevant research	Strategies for searching international and Indian databases for Indian studies Principles and methods to follow to identify studies from India	Skill-building activities in how to: Develop search strategies for Indian studies in national and international databases Explore websites and local resources to identify research information relevant to India Appraise search strategies
4		Evaluating searches and screening studies Conceptualising the question further considering the Indian context Identifying inclusion and exclusion criteria Developing a search strategy and appraising the search strategy	Group work and a presentation on Indian resources A worked example as a case study
5	Extracting data from included studies	Coding and extracting data	Group work and a presentation Hands-on activities in data extraction and coding
6	Method of analysing findings	Designing and planning systematic reviews	Hands-on experience in developing protocols Smaller groups appraising protocols
7		Critical appraisal and synthesis of quantitative studies in a systematic review Tools, challenges in critical appraisal and quantitative synthesis	The Indian team was oriented to different quality assessment checklists They were guided through hands-on experience of exploring the quality-assessment checklist for qualitative and quantitative synthesis
8		Critical appraisal and synthesis of qualitative studies in a systematic review	
9	Evaluating systematic review methods	Comparing different tools	Participant-led group discussion Small group activity to make the participants identify and explore the various kinds of critical appraisal tools on their own instead of the trainers identifying it for the participants
10	Designing and planning systematic review	Summative evaluation of the training programme	Self-reflection and group reflection of the cumulative learning experience

The introductory session on systematic reviews prompted discussion of how systematic reviews influence policy and practice in India. It did this by drawing on systematic reviews cited by the National Health Programs (NHP) of India listed on the Ministry of Health and Family Welfare website.

Sessions addressed successive stages of systematic reviews. The session on 'formulating a review question' was designed for participants to identify topics relevant to themselves. Brainstorming discussions considered setting priorities for local needs and issues.

An important learning objective of a later session was to build skills to conduct systematic searches and appraise existing searches. An integral part of indigenising evidence to a specific context is to identify local research literature and we used

the well-researched field of contraception for this activity. We adapted systematic methods of searching international repositories for Indian studies to Indian resources concerning contraception choice and use. These activities were designed to enable the MAHE participants to apply their newly acquired skills to other topic areas, to fulfil the longer-term vision of their being able to prepare systematic reviews with more locally relevant evidence to inform practitioners' and policy-makers' decisions.

Throughout the training programme, participants strengthened their critical appraisal and synthesis skills for quantitative and qualitative research, in part by developing a protocol and seeking feedback from peers and mentors. Every week, in addition to the topics mentioned in Table 1, there was detailed brainstorming about and discussion of three issues:

1. How to adapt content for delivery at MAHE.
2. How to support adult learning.
3. How to decolonise teaching at UCL about systematic reviews.

This course enabled MAHE and UCL to modify their curricula to be more relevant to different local contexts.

Course evaluation

Evaluation looked at the module's content and teaching practices to establish whether teaching was effective and to assist with continuous improvement. Feedback was sought mid-course to support immediate changes to teaching practice and post-course to inform decisions about its future delivery (Elzubeir and Rizk 2002). Participants were invited to reflect on the module's structure, content, readings, articles, shared resources, materials and videos; the relevance of the module to an existing systematic review course at MAHE; group work and assignments; and the expertise of the UCL faculty.

The participants evaluated the teaching practices in terms of how to teach, not just what to teach. Equal importance was given to the 'content of teaching', 'format of teaching' (for example, platforms used for resource materials, activities and pacing the sessions) and the art and science of adult learning (andragogy) in being learner-centred, problem-focused and self-directed by learners who are intrinsically motivated (Smith 2002).

Results and discussion

Figure 1 illustrates the design and delivery of the course, as well as the collaborative learning and outputs that resulted from it.

Figure 1. Overview of the module's design and consequent learning

Learning for MAHE

Participants from MAHE said the course brought in new perspectives and resulted in stimulating discussions about context, indigenising methodologies and customising the search and quality assessment tools. Overall, they felt that the course was highly informative, relevant, encouraged self-directed learning and team-learning, and gave Indian researchers the confidence and skills to conduct such courses in future. They acknowledged that the training programme helped them to adopt a broad approach when synthesising evidence, including in qualitative and mixed-methods studies, compared with the more usual focus on quantitative studies of effectiveness. They saw the programme as helping to strengthen their critical thinking skills and leading to new learning that would subsequently be incorporated into the day-to-day teaching and clinical practice of trainers.

MAHE trainers subsequently shared the skills and knowledge acquired during the programme to train and mentor their colleagues, early career researchers, and postgraduate and doctoral students at MAHE and other institutions from different states in India, such as the All India Institute of Medical Sciences. It was evident from the workshops the MAHE trainers subsequently organised that the course improved their confidence in leading systematic review training. They have been able to transform their training programmes to an adult learning approach, and they plan to hold two or more such training programmes annually for Indian researchers.

Learning for the EPPI Centre

Similarly, the EPPI Centre benefited from working closely with Indian colleagues. Developing the course enabled the EPPI Centre team to reflect critically on the UCL Master's degree systematic reviews module. They can now tailor its

content to students from different parts of the world, including threading concepts of localising evidence in relevant sections, such as emphasising the importance of searching local resources for local, policy-relevant review questions. The course also provided a starting point to develop a similar programme, with teams from across the global south helping them localise evidence to support decision-makers in Brazil, Uganda, South Africa and Thailand.

Collaborative learning

Adult learning strategies ensured co-ownership and co-learning that enabled the teams to continue research in the area. The learners continued to work with evidence synthesis papers and to generate evidence. These are now at different stages of the publications process.

A significant long-term effect of the programme was to provide a strong, sustainable foundation for a cross-disciplinary, international research network for joint research between UCL and MAHE. For instance, the two institutions are involved in systematic reviews of public health topic areas such as contraception and COVID-19.

The collaborative team also conducted detailed analysis of how systematic review evidence is used in NHP guidance and policies in India (Rajwar et al 2023).

Success factors

It was vital when indigenising the course to have an Indian academic with appointments at UCL and MAHE to lead the work. This role aligned the work with pivotal components of a culturally responsive, adult learning approach: mutually supportive learning circles to discuss and apply newly acquired skills; peer mentoring for socio-emotional and academic support; and a teacher-learning relationship that creates a safe and respectful learning space (Ragoonaden and Mueller 2017).

Limitations

The programme's classes took place every week and busy participants found it hard to find the time to read all the required materials, do the activities and come prepared for the small and large group discussions. A subsequent course with another cohort met every two weeks, but this did not overcome the challenge. The fundamental barrier to such programmes may therefore be insufficient funding to protect the time required. Morrison et al (2022) similarly found this factor a barrier to research activity among nurses in clinical practice.

Crucially, training-the-trainer programmes face sustainability challenges as they rely on retaining trained staff (Pearce et al 2012). The EPPI Centre team tried to move from relying on the skills of individual members of staff to committing to organisational capacity in its subsequent course. Participants discussed how providing an environment conducive to learning can support learners formally and informally. This was inspired by what is known about strengthening organisational capacity of research close to policy or practice (Cooke 2005), particularly systematic reviews (Oliver et al 2015). It is unclear whether this approach can improve long-term sustainability.

Indigenising systematic reviews is an emerging area with multiple approaches and tools, but there is little consensus about the best methods to use (Munthe-Kaas et al 2019, 2020). We explored some methods during the course and as part of the wider partnership; however, it is not yet possible to give unequivocal guidance about how to use systematic review evidence in ways that reliably and accurately consider differences between the contexts of study and informing decisions with the findings.

Although participants in the programme have since applied their new learning, we have not assessed how well they did so.

Conclusion

Our programme culminated in the co-production of indigenised learning materials and recommendations for modifying existing systematic review courses. Both teams benefited from this co-learning experience: the MAHE team learned about appraising evidence for its relevance to India, while the UCL team learned how to decolonise course content. Overall, the participants felt that the course was highly beneficial, enhanced independent and critical thinking, and instilled Indian researchers with the confidence and skill to conduct such courses in future. Contextualising evidence made learning more relatable and relevant, which resulted in a continued partnership and long-term sustainable working relationships between the facilitators and the learners.

Training health professionals in evidence synthesis is crucial to ensure that the next generation receives accurate, evidence-based information and to increase the number of healthcare professionals who base their practice on the best available evidence. Our programme enabled us to extend similar training opportunities to researchers, practitioners and educators from other institutions in different parts of the world.

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