

PROGRAM DESCRIPTION / DESCRIPTION DU PROGRAMME

A collaboration for the promotion of evidence synthesis: A Canadian-African Partnership

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Abstract: In 2018, the Queen’s Collaboration for Health Care Quality: A Joanna Briggs Institute Centre of Excellence (QcHcQ) spearheaded an incentive to increase collaboration and international partnerships. As part of this initiative, 6 library scientists from the partner institutions of the Consortium for Advanced Research Training in Africa (CARTA) were invited to Queen’s University in Kingston Ontario to undertake training. The objective was to provide these library scientists with a comprehensive systematic review-training workshop using the Joanna Briggs Institute methodology for evidence synthesis. The intense 6-day training workshop covered evidence synthesis of quantitative evidence and qualitative evidence as well as multiple methodologies for the synthesis of different levels of evidence. As a continuation of the collaboration a joint systematic review was embarked on titled: “The role of library scientists in fostering evidence based health care.”

Background

The Queen’s Collaboration for Health Care Quality: A Joanna Briggs Institute Centre of Excellence (QcHcQ) was established as part of the Queen’s University School of Nursing in 2004. QcHcQ was the first Joanna Briggs Institute (JBI) Centre to be established in North America. QcHcQ is staffed with 5 members, the Co-Directors Dr. Christina Godfrey and Dr. Andrea Tricco, Deputy Directors Dr. Rosemary Wilson and Dr. Kim Sears, and library scientist Ms. Amanda Ross-White. QcHcQ is a leader in evidence synthesis and has an excellent track-record in training and supporting the efforts of healthcare professionals, faculty members, graduate students, library scientists, and researchers in the search and critical review of evidence [1]. QcHcQ’s mission is to improve the quality and reliability of practice and

ultimately health outcomes by enabling the use of best available evidence on patient safety and health care quality. QcHcQ aims to achieve this by engaging in diverse stakeholder partnerships, synthesizing evidence on priority topics identified by the partners, and adapting synthesized evidence from one context to another; applying methods to adapt guidelines or safety/quality information for different contexts; and by collaborating with partners to develop and conduct implementation studies.

The Consortium for Advanced Research Training in Africa (CARTA) is a consortium of 9 academic and 4 research institutions from Central, Western, Eastern, and Southern Africa, as well as 7 Northern partners. CARTA is an Africa-led initiative that supports the development of a vibrant African academy and is able to lead world class multidisciplinary research that impacts positively on public and population health [2].

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CARTA began in 2008 with the underlying awareness that African universities lack the human and financial resources to effectively educate and produce researchers and scholars [2].

Under the auspices of CARTA is the CARTA Librarian Group (CLG). CLG is an alliance supported by CARTA, which is made up of library scientists from the CARTA institutions involved in CARTA's capacity building programme. CLG's support CARTA to achieve its objectives through the provision of information services. With this support CARTA is able to build a critical mass of highly trained African scholars at PhD level, institutionalize CARTA innovations at key partner institutions and secure the future of CARTA graduates by mentoring them to become leaders in their research fields [2,3].

Currently there are many groups in Africa who engage in evidence synthesis, including: 8 collaborating or affiliate centres of the Joanna Briggs Institute (Botswana, Cameroon, Ethiopia, Ghana, Kenya, Nigeria, South Africa); the Evidence Informed Policy Network active in Burkina Faso, Cameroon, Central African Republic, Ethiopia, Mozambique, and Zambia; and the African Institute for Development Policy in Kenya and Malawi. For a variety of reasons, many of these centres are not able to complete the conduct of evidence syntheses following their initial training in this methodology. In this project proposed by QcHcQ, the intention was to support the CARTA library scientists with additional mentorship to assist them to become active evidence synthesis centres and in so doing, promote interactions between Canada and Africa, as well as within Africa.

In 2017, QcHcQ secured a small Queen's Research Opportunity Fund - International Funding award which was used as seed money to fund the collaborative effort between QcHcQ and the CARTA library scientists. Queen's Strategic Research Plan (SRP) 2012-2017 identifies various guiding principles and objectives for advancing the portfolio of research. Under advancing international research, priorities, and global partnerships, increasing global engagement and expanding international research collaborations are key significances. The Queen's Research Opportunity Funds - International Fund supports the prior objective of advancing international research with the understanding that the fund will help to develop and grow international research partnerships and collaborations for Queen's researchers and scholars.

The Comprehensive Systematic Review Training Workshop was held in March 2018 at Queen's

University in Kingston Ontario. Attendees included 6 library scientists from Kenya, Malawi, Nigeria, South Africa, Tanzania, and Uganda. All of these library scientists are involved in healthcare related positions within their library services. In addition to these attendees, 3 library scientists from Queen's University Engineering Library also attended the workshop. The objective of this workshop was to provide training in the methodology of synthesis following the JBI methodology of evidence synthesis. This methodology was chosen for the workshop due to the fact QcHcQ is a collaborating Centre of the Joanna Briggs Institute – an International organization focused on the methodology of evidence synthesis. The JBI methodology is well established and offers both qualitative and quantitative methods. The JBI methodology can be found in detail at the following site <http://joannabriggs.org> and the JBI review manual can be accessed at <https://wiki.joannabriggs.org/display/MANUAL/Joanna+Briggs+Institute+Reviewer%27s+Manual>. The members of QcHcQ are also certified trainers in the JBI methodology of evidence synthesis. This article describes the development of an international research alliance and illustrates the process used to build a network amongst library scientists.

Objectives

The main objectives of this 6-day training workshop were:

1. To conduct a needs assessment to identify the type of support the CARTA library scientists required to initiate and increase their capacity to perform evidence syntheses
2. To develop a tailored training program to meet the needs of the African partners in evidence synthesis
3. To deliver the training program to a small group
4. To set up a mentorship program that will support the African partners as they conduct systematic reviews of literature

The long-term outcomes of this collaboration are to build proficiency in the science of evidence synthesis with the core team of library scientist that came to Queen's University. Our long-term goal is to also engage the healthcare professionals so that they too may gain proficiency in this methodology.

Method

A needs assessment was conducted through an online survey 10 months prior to the training workshop to identify what type of support the library scientists required to increase their capacity to perform evidence syntheses. The needs assessment survey was developed by the Queen's team and piloted with a select group of library scientists. Feedback from the pilot was used to refine the survey tool. Information regarding available technology, personnel, practice links, and organizational readiness was collected from 29 library scientists involved with CARTA. This group of 29 library scientists represents the health librarians at the 9 CARTA institutions. The survey was hosted on the Microsoft Forms platform, as part of the Queen's University Microsoft Office 365 license. Responses from the library scientists were further analyzed, and training needs voiced by the trainees were collected for the purpose of developing a training program. During the first training session an informal discussion further clarified the skill set of the trainees in this area. Following the completion of each of the 3 training models a post assessment was completed by each trainee.

Once the needs assessment phase was complete, the general mentorship program was planned and the selection of trainees occurred. Potential trainees were identified from key centres that displayed a readiness to conduct an evidence synthesis or from centres that displayed the greatest need to obtain this intensive support. The trainees that wanted to take the training and were available to be granted leave were self-selected. Three university library scientists were not able to obtain their visas in time for the course. Six individuals were brought to Canada for a period of 6 days for an intensive workshop in evidence synthesis. Furthermore, additional library science support was provided to assist the trainees with locating the relevant literature for their project. The 6 days of training consisted of 3 modules of the proprietary JBI course. The 3 modules covered the introduction to evidence synthesis; the synthesis of quantitative evidence and the synthesis of qualitative evidence respectively.

The Comprehensive Systematic Review Training Workshop program included rigorous methods and tools to appraise and synthesize evidence from research literature and documentary sources. Trainees gained hands-on experience in drafting a systematic review protocol, including definition of the question(s)

and search, retrieval and selection of research for the review. In addition, trainees gained experience with the process of critically analyzing sample quantitative and qualitative research and expert opinion papers and were introduced to JBI software for performing meta-analysis and meta-synthesis of selected studies. Trainees were given the opportunity to examine the nature of evidence and its role in healthcare to further understand how evidence transfers into health care practice. This program is based on current practice-based research. The goal of evidence synthesis is to integrate current evidence to inform practice, and once complete, these reviews will serve to guide future practice.

The delivery of this workshop required computers with internet access for each trainee, training materials on a memory key and a workbook that was printed for each trainee, qualified instructors, administrative support, a travel agent to organize flights and visas, and meals and accommodation for the trainees. Further, as this course was delivered in March in Canada we provided them with winter apparel.

The workshop equipped these individuals with the skills they need to set up a review panel and conduct their own evidence syntheses. The training workshop dually provided networking and mentorship necessary to support new authors and review panels through conducting evidence synthesis. Currently, there is ongoing mentorship provided to the trainees by email. A protocol for a systematic review is in draft and should be submitted shortly. As well as the needs assessment that was conducted on the entire CARTA group of library scientist (n=29), trainees gave qualitative feedback to the QcHcQ coordinator prior to their departure and were required to fill out a JBI online survey consisting of standard questions to assess the effectiveness of the workshop. The data is reported below and will be used to inform further workshops.

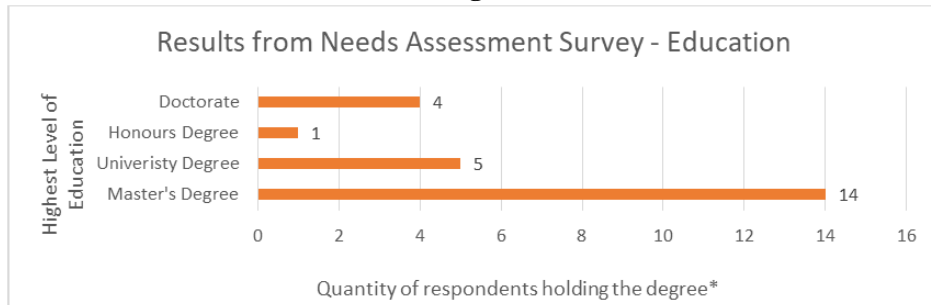
Results

The needs assessment was sent prior to the planning was underway for the workshop to assess the level of current knowledge that participants had prior to attending the workshop. The needs assessment was sent to the entire CARTA group of library scientist (n=29), however as 4 participants did not consent to the sharing of their information only the results from 25 participants can be found below. The needs

assessment demonstrated that the majority of the group had a Master’s degree (14), and there were 4 members of the group that had a doctorate degree (Figure 1). Further, the majority of participants (21) worked in a university setting (Figure 2). The majority of

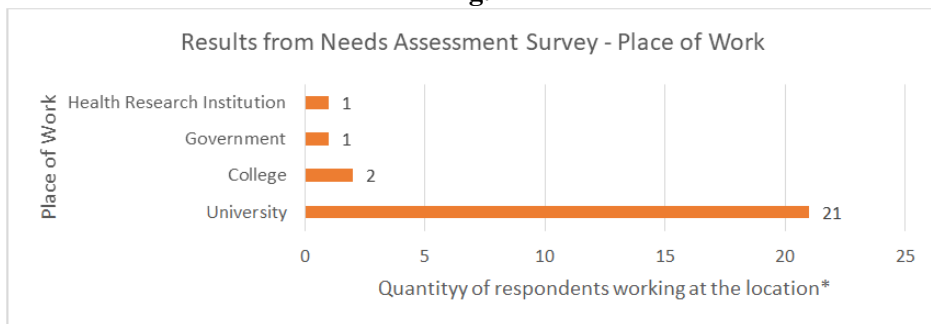
participants identified that they had the least experience with scoping reviews (12) followed by mixed method reviews (8) quantitative reviews (7) and then qualitative reviews (5) (Figure 3).

Fig.1



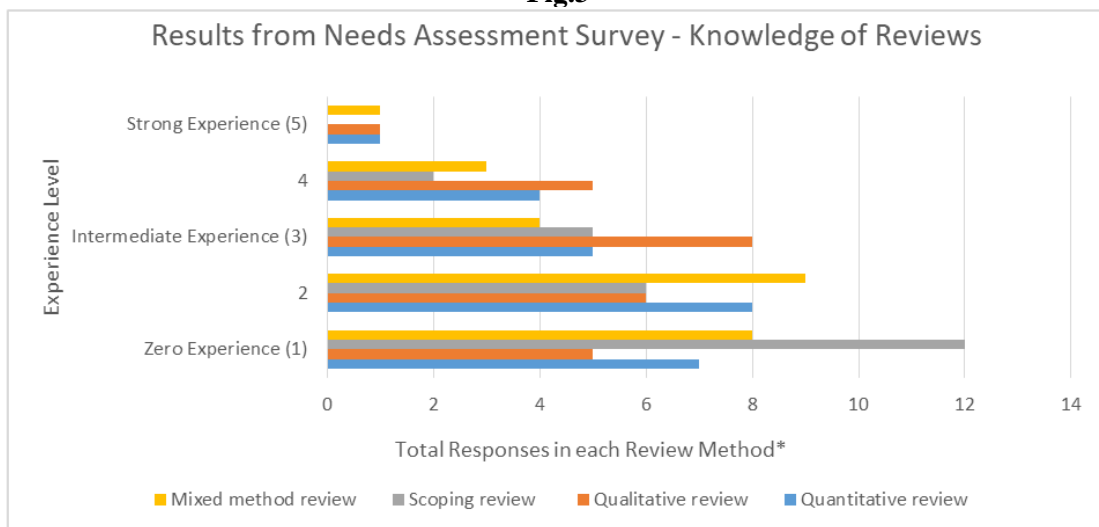
*Four (4) respondents declined consent for research participation

Fig.2



*Four (4) respondents declined consent for research participation

Fig.3



*Four (4) respondents declined consent for research participation.

Nine library scientists were invited to attend the CSRT in Canada. However, only 6 library scientists representing 6 different countries (Kenya, Malawi, Nigeria, South Africa, Tanzania, and Uganda) were able to attend. These library scientists were all the head of the healthcare branches in their respective libraries. Within the group there was a wide range of experience and knowledge with the conduct of evidence synthesis. Some of the trainees had never conducted a systematic review whereas others had experience. One trainee stated, "Up to now, I have been conducting systematic reviews with a 'learners license,' now I feel I am fully qualified to do them." All trainees completed the training. On the last day of training trainees are required to present a protocol of a potential systematic review and all trainees completed their presentations. When suggesting systematic review topics for investigation one attendee posed an important question about strategies used to keep patients safe in a hospital setting. The team at QcHcQ have extensive expertise health care quality and patient safety in both developed and developing countries, and immediately thoughts went to risks such as hospital acquired infections, medication errors, falls, and adverse drug events. However, the attendee went on to explain that patients were often assaulted in their hospital beds and she was determined to investigate strategies to prevent these violations and keep patients safe.

All of the trainees asked questions and were engaged throughout the course. Lively discussions occurred with library scientists from Canada and Africa sharing and comparing their experiences. In the Western context often it would be the clinicians and researchers that would seek and receive training in these advanced methodologies. Conversely, in these institutions, the library scientists are seen as the gatekeepers of this knowledge and are expected to be the first to gain this training.

The post survey circulated online from JBI indicated that 90% of the participants agreed or strongly agreed that by completing CSR Module 2 which was the quantitative component, they had a better understanding of the essential knowledge and skills for the conduct of a systematic review of quantitative evidence.

The post survey indicated that 100% of the participants strongly agreed by completing CSR Module 3, which was the qualitative component; they had a better understanding of the essential knowledge and skills for the conduct of a systematic review of

qualitative evidence. At the end of the workshop one participant noted, "Thank you JBI for the training. It has made a very big difference in my understanding of systematic reviews."

Discussion

Through the teaching of the Comprehensive Systematic Review Training Workshop, attendees were able to develop their evidence-based research skills, conduct evidence synthesis following the JBI method and hone the skills required to set up a review panel. The outcomes of the training workshop included the ability to use JBI software tools to draft a systematic review protocol including (i) identifying a question, (ii) searching, (iii) retrieving and selecting research studies for the review, (iv) critically appraising quantitative and qualitative research and/or text and opinion papers, (v) data extraction, and (vi) the use of the JBI software to analyze and integrate the new knowledge using either a meta-analysis or meta-synthesis.

International partnerships were developed and through the workshop, a joint research project was established that will allow for continued mentorship and support. The development of international research collaboration was built alongside a commitment to expand international relationships. These international partnerships have allowed for a systematic review entitled, "The role of librarians in fostering evidence-based health care: a systematic review" to begin as an application of the skills developed and learned through the workshop.

With many countries in Africa represented around the table, it was valuable to learn the profound influence that context plays on the focus of health care. This alarming and unexpected extension of the bounds of the concept of patient safety highlights the importance of being aware of the context in which people live and work. As a result of the impact of the definition "keeping patients safe" and how this definition was shown to have a truly situational context based on one's experience, it is essential to remain mindful to the global context. Remaining open to hearing the experiences of professionals is a key part of bringing evidence into practice globally and is consistent with the tailoring, problem solving and mutual learning activities that are part of the Knowledge Translation process [4,5]. These activities address the "know-do gap" that exists between what is

known and what is done following the synthesis of the best available evidence. There is a fundamental need to bring together clinicians, policy-makers, and researchers in Low- and Middle-Income Countries (LMICs) to define concepts like “quality of care” at a cultural level to avoid inappropriate comparisons that can add further barriers to evidence use in LMIC. Collaborators from developed countries need to be prepared to provide consistent support and give as well as receive guidance from local colleagues in the knowledge translation process. Ultimately, the sustainability of evidence-informed implementation projects depends on their appropriateness and feasibility in the environment and the commitment of the setting to a local definition of quality.

Trainees also commented on their lack of academic status as library scientists and an uncertainty about their role in conducting research as perceived by some researchers in their institutions. The role of the library scientists and what they could offer in terms of evidence synthesis was unclear prior to attending the workshop; however, with the practical and hands-on knowledge they received from the training program, they received a foundation of skills to support the teams they will work with.

Conclusion

As a result of this international collaboration, 6 African library scientists completed the Comprehensive Systematic Review Training Program following the Joanna Briggs Institute methodology for evidence synthesis. This international partnership has facilitated the development of a joint systematic review protocol entitled, “The role of librarians in fostering evidence-based health care: a systematic review” with continued support from QcHcQ members. The QcHcQ collaboration with CARTA members has been a worthwhile alliance and planning has begun to prepare another training workshop, with considerations for it to be held in Africa. This fulfills

our initial aim to increase the capacity of professionals’ use of evidence synthesis to inform practice.

Statement of Competing Interests

No competing interests declared.

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