

BUILDING THE CAPACITY OF AFRICAN HEALTH LIBRARIANS TO BECOME KNOWLEDGE BROKERS THROUGH A KNOWLEDGE BROKER LEARNING PROGRAMME

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ABSTRACT: Knowledge brokering is a knowledge translation strategy used to promote evidence-based practices amongst healthcare workers. Health librarians in the role of knowledge brokers facilitate the uptake of evidence-based practice by healthcare workers. Knowledge Broker skills enable the health librarian to contribute to the achievement of Sustainable Development Goal 3 of good health and well-being through the provision of evidence-based health information to healthcare workers to meet their knowledge needs. Aspirations to create an African network of knowledge brokers brought forth the knowledge broker learning programme. The objective of the knowledge broker learning programme was to develop African health librarians' role in knowledge brokering; thereby creating a support structure for frontline healthcare workers to access the best knowledge resources to aid them in their patient care decision making. The knowledge broker learning programme was prepared in modules that were modelled on the elements of the Promoting Action on Research Implementation in Health Services framework as it delineates the factors of knowledge translation. The first pilot knowledge broker learning programme was delivered to eight health librarians from Zambia and Zimbabwe in 2018. The second knowledge broker learning programme was set for the first quarter of 2020 and was to be delivered to six health librarians from Zambia, Malawi and Rwanda. It was hoped that more health librarians from other parts of Africa could be equipped with knowledge broker skills using this knowledge broker learning programme.

KEYWORDS: health librarian, knowledge broker, evidence-based, PARIHS framework, learning programme.

BACKGROUND

The current landscape of the field of medicine demands that health care workers have access to the best clinical evidence information regardless of which part of the world they are in. Globally the undertaking of best practice in the delivery of effective health care has necessitated the incorporation of accessible evidence into practice systems of health care workers Dogherty et al. (2013). To this effect health care workers are progressively being urged to administer treatments to their patients using evidence based practices Wilkinson et al. (2009). However, so many factors hinder the use of evidence-based information by healthcare workers in their practice, which has ramifications on patient care and inadvertently translates to poor utilisation of

insufficient health care implements Graham et al. (2006). The failure on the part of healthcare workers to use evidence-based health information generated from research suggests a fundamental gap between what is known from research and what is done with relevant knowledge use in health care practice Lomas (2000). On this basis, health librarians acting as knowledge brokers have a major role to play in bridging this gap between research and practice in the health care setting by providing relevant healthcare information from the health research base to health care workers Booth (2003). The actions to link research to health care workers by way of making evidence-based information accessible for use in their practice is a stipulated function of a knowledge broker who by doing so facilitates the transfer of knowledge Lomas (2007). These demands in the health care sector have precipitated the role of the health librarian to evolve and be comparable to that of a knowledge broker as their roles consist of supporting healthcare workers to have access to clinical practice guidelines, detailed literature searches and skills development for evidence based practice activity Robeson, Dobbins, and Decorby (2008); a role essentially played by librarians on a daily basis.

The health care systems of developing countries in Africa are not benefiting from evidence-based practice, despite the availability of evidence from health research information National Health Service (NHS) Education for Scotland (2015). In order to mitigate the inability of health care workers' uptake of evidence-based practices for effective health care delivery and to promote good health outcomes particularly for the health care workers of Chitambo, the Friends of Chitambo embarked on the implementation of the knowledge broker role in the Chitambo health care system in 2015. A study on Nurses in Zambia showed that they appreciated the use of research in their clinical practice Monde, Akakandelwa, and Kanyengo (2017). This is the more reason why the implementation of the knowledge broker role was critical so that it could effect the embedding of knowledge in the work practices of health care workers at Chitambo hospital, Zambia.

Friends of Chitambo is a Scottish funded charity organisation who among its objectives was to reduce morbidity and mortality in Chitambo district by supporting health care workers through various projects. One of the projects they were implementing, was the 'knowledge component' of the 'Emergency Care Communications Project' of the Friends of Chitambo. The visualisation of the knowledge component was to promote converting of knowledge into action for health care workers for improved health care service delivery in Zambia as well as other parts of Africa. Knowledge into action facilitates conversion of available knowledge from health care research into decision making of health care workers, thereby enabling safe and effective health care delivery through implementation of its repetitive sequential activities NHS Education for Scotland (2015). The promotion of knowledge brokering through the knowledge broker learning programme is part of the initiatives which are now a priority in national and international research agendas; and has arisen to address the inconsistencies in health care service delivery through policy and programme implementation leading to the improvement of professional conduct in the health system National Health Service (NHS) Education for Scotland (2015).

In September 2015, the United Nations Member States adopted the 2030 Agenda for Sustainable Development, which set the pace for global and national frameworks to implement actions to achieve the 17 Sustainable Development Goals (SDGs) and their 169 targets United Nations (2015). The endorsement of the 2030 agenda for sustainable development by the United Nations calls for efforts aimed at meeting the targets of the goals of this agenda. In this connection, librarians can sustain innovations meant for the achievement of the SDGs by enabling use of information resources Echezona, Momoh and Afegbua (2017). Health librarians and libraries in particular are contributing towards the 2030 agenda, by virtue of them servicing the health system through the provision of information to meet the ever-changing information needs of health care workers. This is so the health workers can meet their practice needs as well their educational and research needs Ullah and Anwar (2013). Ideally, the pursuit for sustainable development calls for accelerated commitment of sections of public and private institutions and; as such librarians are agents of development by virtue of their ability to generate evidence that can contribute to SDG implementation Pinto and Ochôa (2018). Stakeholders must also recognise that health librarians work in a contributory development role, aiding the attainment of good health and well-being for all global citizens through SDG 3.

PURPOSE

The knowledge broker learning programme targets health librarians with the aim of helping health librarians understand the importance of facilitating the translation of knowledge into practice, in a healthcare system through the use of the knowledge broker role. Therefore, implementation of the knowledge broker learning programme was aimed at advancing the formation of an African network of knowledge brokers comprising of health librarians from different African countries. Health librarians who have participated in the knowledge broker learning programme have competencies required for the knowledge broker role. Competency in the knowledge broker role helps health librarians engage in activities that can positively contribute to healthcare systems they serve, by ensuring access to current and relevant information, which they repackage to suit the specific knowledge needs of the health care workers in the health system.

METHODS

The first knowledge broker learning programme course was delivered over a three-month period, April to July 2018. A team comprising of librarians from the University of Zambia (UNZA) Medical library and the Information Training and Outreach Centre for Africa (ITOCA), with remote guidance and technical support from the Health Service - Scotland prepared the course content of the knowledge broker learning programme. The course content adopted the constructs of the Promoting Action on Research Implementation in Health Services (PARiHS) framework as contented by Helfrich et al. (2010) with the principles of the framework suggesting interrelations between its elements that stimulate effective enactment of evidence based practice by health care workers.

The knowledge broker learning programme course has four core learning modules, (Figure 1) National Health Service (NHS) Education for Scotland (2015). These modules can be adapted to whatever context thereby creating a possibility of modifications to the core modules.

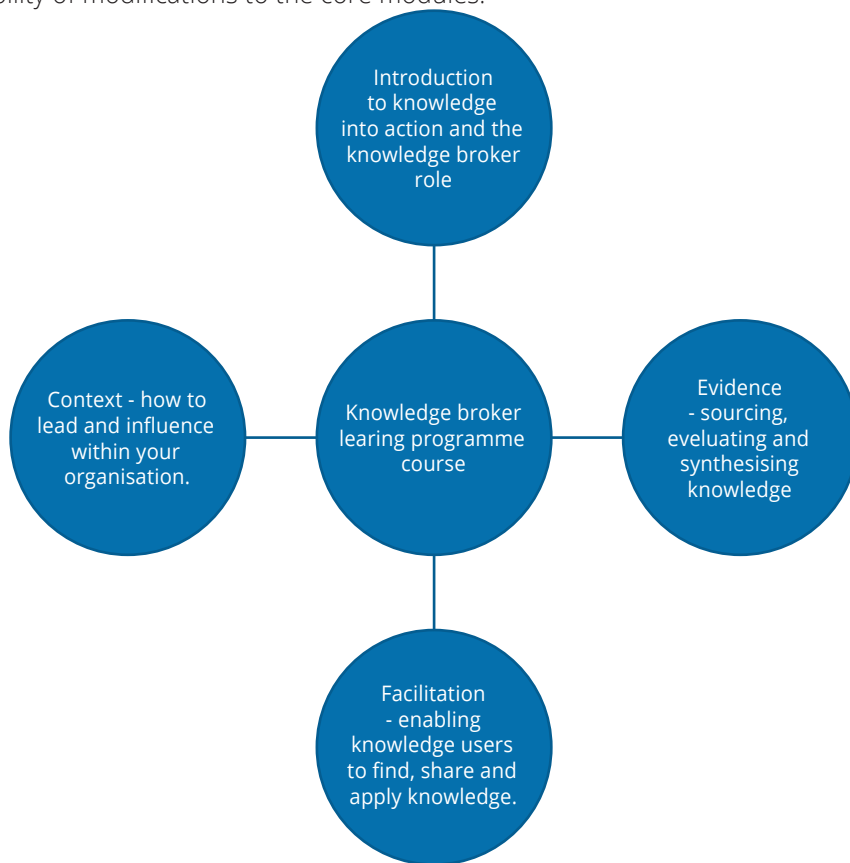


Figure 1: Knowledge broker learning programme course has four learning modules

The knowledge broker learning programme course had its content compiled into a workbook with guided readings. The delivery of the course was done in two parts:

- The first part was a face to face learning session from 17 - 19 April 2018 held in Lusaka, Zambia. The session was comprised of presentations, group exercises and discussions
- The second part ran for fourteen weeks. This part had blended learning content of the four modules delivered through the Information Training and Outreach Centre for Africa Moodle virtual learning platform. This was necessary as during the blended learning participants were required to hand in short work-based reports at the end of each module to apply the lessons learnt on a particular module to which the course facilitator in Scotland gave written feedback. The learning in this part incorporated facilitated group discussion via a knowledge broker WhatsApp group.

All participants of the first knowledge broker learning programme were asked to complete three surveys:

1. Pre-workshop survey of knowledge broker learning programme,
2. Face to face learning programme survey, and
3. Knowledge Broker Blended Learning Post Workshop Survey.

Seven out of the eight participants answered the survey questions. The eighth participant did not take part in any of the surveys.

FINDINGS

Perceptions of participants before the knowledge broker learning programme

Four out of the eight participants indicated that they had an opportunity to receive some form of training on knowledge management prior to attending the course. However, all the participants gave a response when asked to describe their understanding of a knowledge broker in one sentence. Their responses are indicated in Box 1.

Box 1. Perceptions of a knowledge broker before training

- *"A knowledge broker is a person/organisation that move knowledge and create connections between researcher and their various audiences".*
- *"I think a knowledge broker is someone (a librarian) who interacts with various health workers in order to provide them information and knowledge for particular situations".*
- *"A knowledge broker is an intermediary that brings knowledge sources together through networking".*
- *"A knowledge broker is someone who acts as an intermediary between health researchers, policy makers and front line health care workers in order to promote the use of evidence-based information in frontline health care".*
- *"An individual who transforms research into policy and practice by providing various links and summaries for the purpose of transforming research into policy".*
- *"A person (informationist) or organisation who acts as an intermediary between the producers and consumers of knowledge".*
- *"Facilitates access to ethical and sound knowledge between the producers and users".*

Additionally, there was a consensus amongst the participants that they wanted to gain a better understanding of the knowledge broker role after participating in the knowledge broker learning programme.

Perceptions of the participants after the face-to-face learning session

All participants rated the face-to-face learning sessions as having met their expectations with all of them stating that they would recommend the learning programme to other health librarians. Seven of the participants rated the overall knowledge broker learning programme as being excellent whilst one participant rated it as being satisfactory. In replying to the question on what they will do differently as a result of attending the face-to-face training, participants gave responses indicating some plans to begin practicing the knowledge broker role (Box 2).

Box 2. Perceptions of knowledge broker role after face-to-face training

- *“Put knowledge into action by incorporating social media in my practice”.*
- *“Conduct Systematic Reviews”.*
- *“I will do a lot and encourage my supervisors”.*
- *“I will be able to put across the knowledge broker role in my institution”.*
- *“Do more reviews, more evidence-based support for my users. Better searching techniques... So much”.*
- *“I will work more on providing usable knowledge to healthcare workers by packaging it in a format that is usable and synthesised”.*
- *“I hope to practice as a knowledge broker in many aspects beyond the healthcare environments”.*
- *“I will apply management skills in my workplace, so that members of staff at Chitambo Hospital can learn and understand about Knowledge management”.*

Perceptions of the participants after the blended learning session

There was a consensus amongst participants that they had gained a lot in terms of new knowledge and new skills on the knowledge broker role. Most of the participants seemed to be inclined to evidence summaries when asked what knowledge products they had intentions of producing or were already working on after participating in the blended learning session. See Box 3 for perceptions of participants on the knowledge broker role after the blended training.

Box 3. Perceptions of knowledge broker role after blended training

- *“I have produced evidence summaries for some post graduate medical students and lecturers”.*
- *“Evidence summaries, A Guide”.*
- *“Evidence summary”.*
- *“Basic evidence Summary”.*

It was also apparent from the responses given by the participants on how they would apply the new skills and knowledge they had gained going forward in their work activities. They indicated that they were planning courses of action that they would take after participating in the blended learning session. The planned actions are articulated in Box 4.

Box. 4 Future application of new skills and knowledge after training

- *"Would like to practice producing evidence summary and be an active player in information provision to students and lecturers by meeting their specific needs".*
- *"To enhance our institutional repository with evidence summaries rather than populating it with research articles that are difficult to apply in practice and also offer critical appraisal sessions".*
- *"I wish to use my skills to interact with lecturers, researchers and clinicians so I can provide them with well synthesised evidence summaries. I want to use my skill by facilitating knowledge sharing among health professionals in different ways such as use of social media, face to face interaction."*
- *"By trying to formulate new ideas in different skills and knowledge acquired"*
- *"I plan to get more embedded into the activities of my faculty".*

Outcomes

The knowledge broker learning programme, which ran as a training and workshop session, brought together health librarians who encounter similar issues thereby enabling them to explore ways in which they can address any identified challenges in the provision of information. Besides, it sought to strengthen interpersonal relationships amongst the health librarians in the proposed African knowledge broker network. The learning programme also facilitated the laying of a foundation for the establishment of an African knowledge broker network of African health librarians to promote the sharing of expertise and further development of their knowledge broker roles.

In the first training, eight health librarians, five from Zambia and three from Zimbabwe were successfully trained. Six of these health librarians were from medical school libraries of Universities; one was from a nursing school library and one was a health information officer for Chitambo, based at the Chitambo district hospital, Kabwe, Zambia. All the health librarian participants completed the face-to-face learning component and all proceeded to the blended learning component except for one. The blended learning content was fully completed by four of the librarians whilst three librarians did not complete all the modules. Each course participant was given a certificate that stated the level of completion of the course. In the second training, the knowledge broker learning programme did not take place physically as planned, it was conducted in the second quarter of 2020 using online platforms (Moodle and Zoom) due to the coronavirus disease (COVID-19). The second knowledge broker training had 23 participants with 15 participants successfully completing the training. The participants were health librarians from Rwanda, Malawi, Namibia, Ghana, Ethiopia, Seychelles, Uganda, Nigeria and Zambia.

Lessons learnt

The period for the delivery of the course, especially the second part in particular was too long. Feedback from the participants indicated that they were of the view that the programme should be shortened in order to keep the momentum for the course going and have it achieve its intended purpose. The GoToMeeting mobile application was chosen as a means of communication and discussion for the course participants and course leaders. This platform was chosen in the planning phases of the course, as the course design required that there should be periodic discussions on modules during the blended learning part. This was not successful, as the utilisation of this platform requires high strength internet connectivity and most participants failed to connect to the platform owing to their weak internet connectivity. This also led to a resolution that for the next learning programme each participant will be assigned a mentor, meaning there will be one on one communication between a mentee and his or her mentor. Some participants who successfully completed the first knowledge broker learning programme have agreed to take on mentorship roles for the second course. The course administrators believe that this will work better than the group chats and help achieve the course intended aims and objectives.

DISCUSSION

Health information that is evidence based is what is deemed as suitable for healthcare workers as it enables them to deliver effective health care Lavis et al. (2003). Health care workers have a fundamental obligation to consult the health research evidence base as they deliver patient health care so as to determine the right intervention to take Institute of Medicine (US) Committee on the Health Professions Education Summit (2003). It is for this reason that attempts to bring about the uptake of evidence based health care research information are anchored in procedures and processes that will produce synthesis from health research findings to be fused into health care practice so as to guide improved service delivery Dogherty et al. (2013). The PARIHS framework, can be used as a guide by individuals embarking on knowledge translation Kitson et al. (2008), and such undertakings may lead to improved health care service delivery through the use of knowledge brokering. This is because the PARIHS framework is a combination of context, evidence and facilitation that gels to get the best outcomes for patients. The framework is comprised of three elements: evidence (E) - denoting sources of knowledge for health care stakeholders; context (C) – denoting the environmental setting in which the knowledge translation is implemented; and facilitation (F) – denoting the technique used to support healthcare workers change their attitudes in health care practice Helfrich et al. (2010). Kitson et al. (2008) postulates that successful implementation of the framework is a function of interaction between the elements of E, C, and F; the interaction of evidence, with context and facilitation of the process of that interaction.

The utilisation of the PARIHS framework for the development of the knowledge broker learning programme can be viewed as a strategy under the scope of capacity building of health librarians. The knowledge broker learning programme can serve as an advocacy tool to highlight the contribution librarians make to development. The learning programme may be used with the aim of strengthening the ability of health librarians repackage and deliver up-to-date evidence-based health research information to the health care workers that they serve.

The knowledge broker learning programme arose out of the need for the formation of an African knowledge broker network. The purpose of this network would be to promote the use of techniques identified as best suited in promoting the translation of knowledge into action by health librarians for the health care workers they work with closely. The knowledge brokering process in the health care setting is illustrated through use of the knowledge to action framework. This framework depicts the process as being one that is multifunctional as any generated health care knowledge is cultivated in order to make it suitable for use by healthcare workers in different fields of healthcare services Graham et al. (2006).

Fulfilment of this perceived African knowledge broker network required that health librarians be identified and be capacitated to perform the role of knowledge broker. Tactical approaches for capacity development can encompass the incorporation of provision of platforms for innovation or inventive application of capacity for health care delivery Bolger (2000). Bolger (2000) further asserts that meaningful capacity development must clearly outline; whose capacity is to be developed and explain why it needs developing. The health librarian's role as a Knowledge Broker is important for the health care system as it expedites the knowledge translation process by spanning boundaries that are inherent in health care contexts Kitson et al. (2008). One can therefore frame the health librarian in the bigger picture of meeting targets for the health agenda 2030 through highlighting how, in their role of knowledge broker, they have the capacity to translate knowledge into actionable formats for health care workers to use at points of patient care. However, the significance of the knowledge broker learning programme may not be visible in the short term especially given that only a few countries in Africa have taken part in the training so far. Its far-reaching benefits for the health librarians who undergo the training, as their ability to make meaningful contributions to strengthen health care service delivery, cannot be under-estimated. Overall promotion of the United Nations 2030 agenda must begin with localised efforts. The efforts of a librarian to provide access to relevant information in a particular sector are

contributory steps towards the achievement of sustainable development goals for that sector by 2030 United Nations (2015).

CONCLUSION

The health librarian in the knowledge broker role depicts one of the key roles librarians worldwide are playing in the United Nations 2030 agenda for sustainable development. The resultant collaboration between health librarians and stakeholders in the health sector have brought about important partnerships that can alleviate improved health care delivery. The partnerships are also in line with the targets of sustainable development goal 17, which call for collaborative partnerships amongst the different sectors of society to achieve the other goals, in this case the SDG 3.

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