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Proposed title: Challenges and opportunities in conducting health services research through international collaborations: a review of personal experiences

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Abstract

There is increasing attention to international collaborations in health services research with a number of benefits. For developing and nurturing international collaboration, an increasing number of funding opportunities are available globally. Having observed and experienced the growth of international collaborations in the global health research field, the authors reflect upon their own experiences in international collaboration between the United Kingdom and many different countries in the process of health services and educational research and discuss challenges and opportunities to conduct impactful research in international settings. The commentary also highlights key issues and strategies for learning and achieving more impact from global health research: including, communication, co-creation, strong leadership and sustainability.

Keywords

International collaborations, global health, health services research, pharmacy

Introduction

International collaborations in health services research (HSR) are receiving more attention, especially when researchers from both developed and developing countries are each involved.[1] HSR is defined as 'the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviours affect access to health care, the quality and cost of health care, and ultimately our health and well-being' by the Academy for Health Services Research and Health Policy.[2] This covers various aspects from health policy, health care practice, workforce development, and much more.[3, 4] This multidisciplinary research has a huge impact on health outcome improvement nationally but also globally. The benefits of international collaborations in global health have been addressed in many documents. They can be classified into two categories: (a) collective global health improvement, and (b) research capacity building. Collective global health improvement includes preventing the spread of global infectious diseases,[5] and supporting low and middle income countries (LMICs) for improving national health, which can collectively improve global health.[6] Research capacity building covers developing local research capacity[5] including institutional and skills/expertise development.[1, 7]

The authors have developed many of their international collaborations due to their membership of the international Pharmaceutical Federation (FIP), attending and hosting the International Social Pharmacy Workshop, via international PhD students who have gone home and become academics following obtaining a PhD from Nottingham, through international university networks and because of the University of Nottingham in Malaysia where our pharmacy school is also based.

There are also increasing opportunities to obtain funding to collaborate with colleagues from LMICs across the world. In the United Kingdom (UK) Official Development Assistance (ODA) funding has enabled increased collaboration with colleagues in LMICs. The Global Challenges Research Fund (GCRF) is a £1.5 billion fund announced by the UK Government to support cutting-edge research that addresses the challenges faced by developing countries.[8]

ODA is defined as government aid designed to promote the economic development and welfare of developing countries It is provided by governments and official agencies in the 23 countries that are members of the Organisation for Economic Co-operation and Development (OECD), Development Assistance Committee (DAC) and the European Commission.[9]

Having observed the growth and prosperity of international collaborations in HSR, the authors reflect upon their own experiences in international collaborations in the process of health service and educational research and discuss challenges and opportunities to conduct impactful research in international settings. The commentary highlights key issues with performing research in international settings and provides strategies for learning and achieving more impact from global health research.

Successes and Challenges

1. Universitas 21 social media project

The University of Nottingham is a member of Universitas 21 (U21), a network that empowers students and staff from 27 world-class universities to share excellence, collaborate across borders and nurture international knowledge exchange. The author (CA) was the pharmacy lead for the U21 Heath Sciences Group for. A number of years during which time an international, interprofessional research project on using Social Media in Health professional education was carried out.

The U21 SoMe project was initiated after the U21 health sciences group meeting in Dublin in 2013. The key objective of the initiative was to identify and recommend strategies to integrate and harmonize social media into the full spectrum of health professional education, and to carry out educational research and evaluation to follow social media evolution in the future. The project was implemented to specifically examine three areas; examples and good practices in the use of social media for health education, examples and types of policies to guide social media use in health education, potential areas of educational research in using social media for health education.

A steering committee was formed that comprised an academic and a student volunteer from 8 universities and all U21 HSG disciplines. A one-day workshop took place in Vancouver in 2014 to discuss progress and a one-day workshop about the findings took place in September 2014 in Shanghai. Between November 2013 and September 2014, the steering group completed a literature review and carried out a U21 member school survey to find out how different schools were using social media for education, and what policies they had in place to guide the appropriate use of social media for education. The findings of the survey have been published and details of the project can be found in the paper cited.[10]

From 2015 the U21 SoMe steering committee worked on developing a repository of educational materials and policies related to social media in health education and establishing an educational tool kit to help schools interested in starting or enriching the use of social media in health education. A one-day Social Media workshop took place in Santiago, Chile in 2015. In September 2016, a third Social Media workshop was organized and took place in Birmingham, UK. The one-day event included a workshop on Professional identity, as well as presentations of several educational interventions using Social Media in U21 institutions. In November 2016, the Social Media steering committee agreed to move to the knowledge translation phase of the project by encouraging each of the 11 now participating university to form a local Social Media team to implement and measure an educational intervention.

So why did this project work so well? We took time to talk through issues, cultural differences and so on and co-created the work. It had clear agreed, aims and objectives. We had strong leadership, and a good administrator, well hosted initial face to face and follow up meetings that included social time helped with initial and on-going bonding with numerous telephone conferences in between. The teleconferences were challenging to organise time wise with people in Australia, Europe, Asia and Canada and Mexico to accommodate. The students drove the project forward and formed their own sub network. It was also sufficiently funded to have face-to-face meetings and we used the opportunities to run workshops at the U21 health science annual conferences. The work has been sustained as many of the U21 university departments including University of Nottingham School of Pharmacy have now included education on Social media in their curriculum.

2. Kenya Nottingham Project

We were previously funded by a UK AID SPHEIR project to transform pharmacy and chemistry education in Kenya in partnership with four universities, The international Pharmaceutical Federation (FIP) , the Pharmaceutical Society of Kenya (PSK) There were also numerous other stakeholders for example, the Commission for University Education, Pharmacy and Poisons Board. This project enabled us to build lasting relationships with Kenyan partners and had facilitated an ongoing research project about the development of competency based education in Kenya. The project was supported at the highest level by University Vice Chancellors. This was an important driver for moving things forward. The research aims; to explore the health needs in Kenya and identify those which are serviceable by the current pharmacy workforce, and that of the workforce in the near future, to assess the current extent to which the FIP Global Competency Framework[11] applies to foundation pharmacists in Kenya, to identify the fundamental professional competencies which registered pharmacists should be able to demonstrate in order to meet the health needs of the Kenyan population, to describe and map the dynamics and relational ties between key stakeholders and decision makers central to the creation and implementation of pharmacy workforce development initiatives. From the perspective of delivery, the Kenyan Partners provide the substantive direction for the project. University of Nottingham's contributions can be viewed as facilitation, guidance and support to deliver on the aspirations of the programme. In this way, the co-creation of solutions to deliver transformation of the Kenyan curricula is key. Such co-creation is directly evidenced through University of Nottingham's involvement in curriculum reviews, new course construction and delivery of handbooks and frameworks. From an administrative perspective University of Nottingham devolves as much responsibility for decision making as possible to our partners, whilst remaining in compliance with local rules.

In order to do the research it has been necessary to engage and work with a number of stakeholders and gatekeepers. It has not always been easy to work with university partners in a resource poor country where academics are very stretched, have high teaching loads,

poor infrastructure and have frequent strikes. Communication has been faciltiated by regular visits to Kenya as well as telephone conferences, messaging and emails. In Kenya, a specific communication app (WhatsApp, WhatsApp Inc., California) is hugely used. Choosing the best way to communicate, or adapting to the most familiar way to communicate, is a key to succussful communication. Physical visits were also very important in order to keep continuous engagements with collaborators. We developed a very good relationship with our partner PSK who has acted as an essential advisor to the Nottingham team by sharing expectations around Kenyan business practices, acting as an intermediary between the Nottingham team and university partners in Kenya, informing on new healthcare initiatives and working with the Nottingham team to identify new areas of work within the project. During the PSK-FIP conference in June 2019, a workshop was held, inviting representatives from other African countries. In the conference, attendees reviewed the FIP Global Competency Framework[11] to rank each competence for its importance to the role of the African countries. The CEO of PSK supplied several references to the session facilitators informing them of the Kenyan government's health strategy and intentions for Universal Health Coverage to set context for the activity. This is another example of the contribution of PSK to the project drawing on their expertise of the larger health picture in country.

Between February and June 2020, PSK have supported the Nottingham team by distributing a survey which again looks at the significance of the Global Competency Framework to the role of the pharmacist but specific to the Kenya pharmacist. This makes use of their extensive network of practising pharmacists. Results will be analysed in Nottingham. Following this, PSK has planned to have several workshops to come up with a competency framework for practicing pharmacists. The Competency Framework Consensus Development Panel will draw experts from the practice committee of PSK, the universities, the Commission of University Education, Pharmacy and Poisons Board and others co-opted as needed. A Health Needs Assessment workshop and a consensus development workshop for completion of the framework will follow. The eventual outcome of these meetings will be a national competency framework for pharmacy practice in Kenya.

3. Bangladesh - building research capacity

One of the authors (CA) worked with a colleague in the pharmacy school at Dhaka University whom was previously unknown to the author but had held a post-doctoral position at University of Nottingham in the past. They successfully apply for British Council Funded UK-Bangladesh Higher Education Link Programme funding to develop research capacity in Bangladesh. Unsafe injection practices have an inherent risk of spreading three preventable primary blood borne viral pathogens; HIV, hepatitis B and C viruses. Preference of injections to oral medications and widespread misuse of injections in many developing countries including Bangladesh. Young Pharmacists and doctors were trained in research methods and to use used qualitative (in depth interviews, focus groups and non-participant observation) and quantitative methods (a retrospective audit of prescriptions) to explore the extent of injection use and injection safety practices in primary care hospitals in Bangladesh. The project progressed extremely well due to building good relationships and the author's good understanding of south Asian culture and her previous work with a Bangladeshi PhD student who had conducted field work in Dhaka. The findings[12] were very important for Bangladesh. The study received much publicity on more than one TV news channel and also in the daily newspapers. It was a pleasure to work with such a talented and hardworking multidisciplinary group of researchers.

4. Indian – tried and failed

Sometimes attempts to develop research projects fail. CA attempted to co-develop a project on people's experiences for taking part in clinical trials in India with a colleague in Oxford. She visited India and met key people but due to lack of pump priming funding we were unable to get the project off the ground. It is often difficult for hard pressed academics and researchers in LMICs to put time into unfunded activities.

5. Joint PhD students

Technology has made it possible to successfully co-supervise PhD students doing HSR from the other side of the world. Usually this arises due to existing relationships with the

students or the other supervisor(s). Communication is the key with regular monthly video conferences via Teams, Skype, WhatsApp, Zoom, GoToMeeting etc. Where face to face meetings have been possible this has further facilitated working relationships.

The Thai government previously sent students to the UK for a full time PhD. As they have now got more PhDs teaching in their universities, they changed the funding model. The new funding is via the Royal Thai Government as part of the Royal Golden Jubilee (RGJ) PhD Programme, Thailand Science Research and Innovation (TSRI). The students are based in Thailand but is able to make a six month visit to their supervisor in this case to the University of Nottingham. This new model ensures that the HSR is locally appropriate with international input. However, the authors usually do encourage their international PhD students, many of whom will return to be academics, to do their data collection in their home country.

6. UK-Japan collaborations

Collaborations often happen when researchers bring their own network into another country. NA has several experiences of collaborative activities between the UK and Japan and they include successes and challenges.

The first collaborative activities that thrived were the relationships between two pharmacy professional bodies in Great Britain (Royal Pharmaceutical Society) and in Japan (Japan Pharmaceutical Association). This collaboration was established in 2015, aiming to collaborate for the benefit of members of both organisation towards the improvement of patient services with medicines and pharmaceutical public health. A key success was to establish a formal relationship between country-level professional bodies. This was facilitated by the FIP, providing a platform to discuss the future of the profession in each country. The top leadership of both organisations supported the collaborative initiatives, and this played a huge role in driving the activities forward. Challenges faced throughout the collaborative activities included, differences in organisational structures and communication processes. The form of leadership and decision-making process was different between two organisations. This caused confusion regarding the time frame of the project and in

spending the funds. These cultural/structural differences in organisations are challenges that always require attentions. Another challenge was a preconceived idea that a mediator who had experiences in both countries understands all these differences in culture, organisational structures, and different decision-making processes. This preconception was a barrier to necessary communication for collaborative activities. Due to changes in organisational directions of both organisations, the relationship was altered into university-base collaborations and led to a UK-Japan comparative study of health and wellbeing hub functions in community pharmacy.[13] This was a huge learning point for international collaboration. The collaborative mind can thrive into many different ways by shifting challenges into opportunities for another collaboration.

Other UK-Japan collaborations were developed as research projects between UK and Japan universities. These collaborations were easier to set up than the one with non-research institutes because of prior experiences on collaborations between the collaborators and a better understanding of decision-making processes in collaborators' organisations. Universities often have similar decision-making processes even in different countries, having the same idea for research, funding, and using the same terminology in research. This enables smooth collaborative processes. Language issues might hinder some collaborative activities even in university settings. However, continuing communication, assisting with documents and being bilingual all enabled a gradual but consistent progress of communication.

Key issues for these UK-Japan collaborations highlighted a need for clear understanding of both sides of collaborative parties, and open discussion and communication for their decision-making processes. Any preconceived ideas should be dismissed before any collaborations and simple step-by-step process taken to clear any barriers for collaboration.

7. GCRF Bhutan project

Both authors are also engaged with a collaborative project with Bhutan, funded by the GCRF from the UK Research and Innovation (UKRI) as stated above. The GCRF Bhutan project is to

investigate the professional and economic impact of current pharmacy workforce development programmes in Bhutan. This pump priming project aims to strengthen human resources for health policy in Bhutan and enhance the quality of initial professional education and training for pharmacy workforce.

This one-year pump priming project is a necessary step to make our collaboration impactful. This is to assess the current situation, find out any available stakeholder relationships related to the project, and establish a platform for further collaborative projects. The project collaborators include academics from a university, but also the Ministry of Health in order to make a bigger impact in the country. Having the Ministry of Health on board from the beginning made the collaboration smooth, in terms of tackling political and organisational obstacles.

Discussion

The benefits of international collaborations in HSR is obvious. However, the degree of impact of international collaboration varies depending on how the international collaboration is processed. Personal reflections from international collaborative activities and research helped the authors to suggest the following considerations for future collaboration of health service research in international settings.

i. Communication

Communication is the best key to impactful international collaboration. Transparent and consistent communication led a number of projects above to successful outcomes. Good

communication helps to facilitate a deeper understanding of cultural differences between countries, organisations, and local needs and to build trust between partners. Swingler et al.[5] and Costello and Zumla[14] address the need for decolonisation of the power balance in collaboration between developing and developed countries in order to be truly impactful in the subsequent country. Clear and purposeful communication establishes trust and reliance, and develops deeper understanding of cultural/institutional differences, and dismisses any preconceived ideas that can hinder cooperative partnership.

ii. Co-creation

Co-creation is another critical aspect of international collaboration. This affects the sense of ownership and responsibility for collaborative activities. Clear agreed aims and objectives requires a co-creative process, which happened in U21 project and SPHEIR project shared above. In addition, co-creation avoids any power imbalance between partners through shared decision making.[7, 14] Without a co-creation mindset within partnerships, there can be a loss of momentum due to different time schedules in various countries and institutions.

The authors recognise that this is a time-consuming process and it is necessary to have funding for the co-creation. For fruitful collaboration, there are many opportunities for pump priming funding available for international collaboration. Taking an example from GCRF Bhutan project, we will use the GCRF pump priming fund for developing a better and more impactful international collaborative project.

iii. Strong leadership

International collaboration often pursues the development of research capacity in the subsequent country, especially in cases of collaboration between developed and developing countries. Making a difference in the institution and organisations requires strong leadership. Furthermore, strong leadership is needed for getting research findings into policy and practice to affect their national and global health improvement.

Transparent and accountable relationships with relevant stakeholders are key to support leadership in international collaboration. Developing a stakeholder map will support understanding of cultural and organisational differences in the partner countries, as well as directing the leadership in the field. The GCRF Bhutan project will encompass this stakeholder mapping process in the pump priming process in order to clarify relevant stakeholders for further collaborative project.

iv. Sustainability

It is important in all projects to attempt to try to achieve sustainable transformation within and beyond project partnerships. Firstly, within the partnerships, the key partners collectively can help to embed changes. Secondly beyond the immediate focus the profile of the project can be spread by partners within institutions and countries leading to greater change. Thirdly, projects can influence wider national and international changes in policy and practice. Strong accountable relationships as developed in many of our projects also facilitate sustainability. It is important to build time and resources for dissemination events, journal fees, publications and social media activity into funding applications, they should not

be an afterthought. Dissemination and communication strategies that share project learning are important. Examples include development of project websites, blogs, articles and a social media presence. Final reports and interim and summative briefing papers targeted at appropriate policymakers, practitioners, professional bodies are also key. Dissemination events with key change agents are really important, for example the Bangladesh project concluded with a conference, with invited press leading to appearances on national evening news. National and international conference presentations, workshops and Journal articles are also vital for spreading and embedding project results.

Conclusion

This paper has allowed the authors to reflect upon their own experiences in international collaboration for HSR and has revealed a list of important aspects for successful collaboration in international settings. All international collaborations have different challenges but committed researchers who want better global health will always be able to link up with other committed researchers in HSR in different countries. Sharing our experiences and expertise in international collaborations in health service research will enable fellow researchers to convert their challenges into successful collaborative actions leading to better global health.

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