



## WINTER RESEARCH ROUND UP

We now have a new format for the research round up! As well as highlighting research done by others we are going to provide some information about actually doing research. This is not intended to substitute further training, such as Masters level study, rather it aims to give an overview of what doing research might be about. This month's topic is how to formulate research questions, and over the coming months we will be covering different research methods, research ethics, dissemination and much more.

We hope you enjoy these articles and find them useful – do contact us with any questions or comments.

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## DEVELOPING RESEARCH QUESTIONS

In our autumn newsletter we talked about how to get started with research and how to do a literature review. We used the hypothetical example of the use of remote technology by physiotherapists as a topic we might be interested in researching.

Doing a literature review on this topic highlighted:

- The term telemedicine encompasses a broad family of devices such as ipads, the internet, web cams, Skype, monitors.
- The geographical drive of many telemedicine initiatives, for example working with rural communities in Scotland or Australia, with a desire to reduce travel time and disrupt family routines cited as key incentives for telemedicine. These co-insides with other barriers to accessing services, such as incarceration, conflict or security concerns.
- Telemedicine currently concentrates on medical management, such as monitoring blood pressure or foetal distress. This is likely to be quite different from usual physiotherapy work, particularly those that privilege bio-psychosocial interventions.
- Telemedicine may increase the competence and skills of local staff through engagement with more skilled professionals and access to wider sources of knowledge and treatment options.

- There remain significant concerns around the use of telemedicine including privacy and confidentiality, liability, the need for appropriate equipment, internet connectivity and other forms of infrastructure, telemedicine will not necessarily overcome structural barriers to healthcare or change the way healthcare systems are governed.
- Telemedicine must therefore be seen as a component within an existing system, not different from it.

From this I want to develop a theoretical framework for my research.

### **What is a theoretical framework?**

A theoretical framework provides the rationale for conducting your research to investigate a particular research problem. It can be thought of as a way of developing a sense of structure that guides your research. With this example there are a number of different theoretical frameworks you could utilise depending on what you want to understand and the perspectives you may have about physiotherapy and telemedicine. The theoretical framework provides the background that supports your investigation and offers the reader a justification for your study of a particular research problem – it aims to give a sense of why you are looking at the problem in a particular way.

The theoretical framework is developed from and connected to your review of the existing knowledge on the topic. You reviewed the literature and found gaps in it, in this case how physiotherapists are using telemedicine. In the literature review I have highlighted why telemedicine gets taken up more readily in certain areas, but also the problems that it has in becoming part of the health system. I am therefore going to use a theoretical framework that will enable me to focus on these issues – systems and complexity theories. This group of theories was constructed to better understand the behaviour of complex systems, such as healthcare. It has been applied to healthcare, with researchers concluding that innovations were most likely to succeed when they are introduced gradually, led by locally self-organising groups, and allow the most effective solution to emerge from a range of alternatives. Generally speaking, the more complex the system, the less likely that a single external 'solution' will be effective, and since telemedicine is a complex intervention into an already complex system (changing referral pathways, professional roles, and work flow), these theories give some insight into the difficulties of adopting remote technology.

I could combine this with ideas linked to socio-technical theories, which consider how humans interact with technology, and which concentrates on how individuals use technology, such as tools and workstations, in their immediate environment.

### **Developing research aims and questions**

I then want to use my theoretical framework and literature review to develop research aims and questions.

#### **Research aims:**

- Are broad statements of desired outcomes, or the general intentions of the research, which 'paint a picture' of your research project
- Emphasize what is to be accomplished (not how it is to be accomplished)

- Address the long-term project outcomes, i.e. they should reflect the aspirations and expectations of the research topic.

Based on my theoretical frameworks my research aims and questions could be:

#### Research aims

- 1) To measure the extent of the use of remote technologies by physiotherapists in low-resourced settings
- 2) To understand how technologies are used in this context
- 3) To understand how these technologies fit with other healthcare interventions

#### Research Questions

- 1) Which remote technologies do physiotherapists use and to what extent?
- 2) Why do physiotherapists use these technologies?
- 3) How are these different technologies used and implemented?
- 4) How do these technologies combine with other healthcare interventions?

**WE'LL HAVE MORE ON METHODS TO ADDRESS THESE QUESTIONS IN THE NEXT RESEARCH ROUND UP.**

#### **This edition's research items: Employment and disability**

1. [Situation of wage employment of people with disabilities \(Ten developing countries in focus\)](#) – HANDICAP INTERNATIONAL, Washington – December 2016
2. [Promoting diversity and inclusion through workplace adjustments: a practical guide](#) – INTERNATIONAL LABOUR ORGANIZATION, Geneva – November 2016
3. [The autism employment gap report](#) – THE NATIONAL AUTISTIC SOCIETY, London – September 2016