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Knowledge translation intervention to improve evidence-based practice behaviour of allied health professionals: A cluster randomised controlled trial and 2-year follow-up study

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CHAPTER 1
INTRODUCTION

Overview

The focus of this doctoral research programme was to measure whether the evidence-based practice (EBP) behaviours of allied health professionals (AHPs) working with people who have cerebral palsy in a community-based organisation could be changed using knowledge translation (KT) techniques. This chapter introduces the topic by providing:

1) Background information about EBP and KT
2) Background information about cerebral palsy
3) Background information about AHPs' role in cerebral palsy treatment
4) Statement of the problem and rationale for the studies
5) Research aims and questions
6) Overview of the thesis contents.

Background

Evidence-based practice involves using the best available research evidence to inform clinical decisions. Although there is strong support for EBP, there is a significant gap between what research evidence suggests and what health professionals do in most areas of healthcare.[1] The reason this gap exists is complex as there are many factors that may hinder or facilitate evidence from becoming a part of everyday practice.[2] There is a growing body of research that seeks to understand and measure the best strategies to change health professionals' behaviour, and therefore narrow the research-practice gap known as knowledge translation.[3] The ultimate purpose of KT is to increase the use of evidence-based interventions to optimise clinical outcomes. KT strategies include face-to-face workshops,[4] mentoring,[5] clinical guidelines or a combination of strategies known as multifaceted KT

strategies. Systematic review literature suggests that most KT strategies lead to small–moderate changes in EBP behaviour. A KT strategy that is based on a strong theoretical model and designed to overcome context specific barriers is most likely to induce behaviour change.[6] There are unique challenges in the field of cerebral palsy that need careful consideration prior to designing a KT strategy.

AHPs play a key role in assessing and treating people with cerebral palsy. The AHPs discussed throughout this thesis are physiotherapists, occupational therapists, speech pathologists, psychologists and social workers. Although AHPs endorse EBP, lack of time,[7] lack searching and research appraisal skills,[8,9] and lack of access to databases are barriers to new knowledge being translated in a timely and efficient way.[10]

Statement of the problem

Survey data suggest that the research–practice gap exists in the field of cerebral palsy[11,12] despite quality research being available. In addition to the barriers mentioned above, AHPs working with people with cerebral palsy face specific EBP challenges including complex clinical decision-making due to the complicated nature of cerebral palsy, and the rapid expansion of the cerebral palsy evidence base in the last two decades, making it hard for clinicians to keep up to date.[10] For example, a MEDLINE search for cerebral palsy studies during 2012 retrieved 887 articles, compared to 407 studies in 2002, and 218 studies in 1992.

The most common strategy chosen to influence AHPs EBP behaviour to date has been teaching searching and critical appraisal skills. This technique however, may not be feasible longer-term given the ever increasing volume of published literature.[13] Additionally, research evaluating the effectiveness of teaching critical appraisal skills does not lead to an improvement in EBP behaviour.[14,15] Leaders in the knowledge translation field therefore recommend that future KT strategies should pursue the development of

evidence-based information resources (such as research summaries) that are embedded into health professionals' workflow.[13] The idea here is that, evidence embedded in workflow will prompt adoption and thus is easier and less time-consuming to use than strategies that necessitate an interruption in workflow that involves skilled and time-consuming searching.

Despite this, no studies with AHPs have investigated the effectiveness of KT strategies that have revolved around the development of evidence-based information resources. More broadly, the KT evidence base in the allied health professions is scant.[16] There have been no RCTs measuring the effectiveness of KT strategies that have: (1) included a wide range of AHPs, (2) been done in the field of cerebral palsy, or (3) measured a wide range of EBP behaviours.

Research aims and methods

The aim of this research was to measure the effectiveness of a KT strategy (that centred around an evidence-based information resource) to change AHPs' EBP behaviour. The secondary aims were to measure the effect of the KT strategy on EBP knowledge and attitudes. We conducted a cluster randomised controlled trial (RCT) in 2009 with follow-up study 2-years later to test the effectiveness of the KT strategy. The KT strategy was based on a theoretical model called the Knowledge-to-Action (KTA) process and was developed after a comprehensive, informal barriers/facilitators assessment. Barriers identified were: lack of time, skill and knowledge, restricted access to databases, negative attitudes towards EBP and evidence not always being clinically relevant (see Table 4 for details). The KT strategy therefore included an online evidence-based information resource that summarised cerebral palsy research, called the Evidence Alert System (EAS); a 3-day workshop; paid protected EBP time; mentoring; and mandatory use of outcome measures, included in client documentation. The following research questions were formulated to address these aims.

Research questions

Over an 8-week period does a multifaceted KT strategy

- improve AHPs EBP behaviour
- improve AHPs EBP attitudes
- improve AHPs EBP knowledge
- lead to increased use of the EAS?

And further, does a multifaceted KT strategy improve AHPs EBP behaviour over a 2-year period?

The RCT findings have been accepted for publication in the peer-reviewed journal, Implementation Science, which is the leading journal on KT. A copy of the article proofs can be found in Appendix 9.

Thesis outline

This doctoral thesis presents a cluster RCT and 2-year follow-up study seeking to answer the above 5 research questions. It is presented in the following order.

Chapter 1 – Introduction

Chapter 1 introduces the thesis topic by providing background information and the rationale for the studies. This is followed by research aims, an overview of the methods used, and an outline of the thesis.

Chapter 2 – Literature Review

Chapter 2 provides an overview of the theoretical and empirical background of EBP and KT. The key theories that the studies were based upon are highlighted along with an overview of KT strategies and KT research in the allied health professions. The chapter finishes with a detailed rationale for conducting the RCT and 2-year follow-up study.

Chapter 3 – Randomised Controlled Trial Methods

Chapter 3 describes the steps that were undertaken to address the hypotheses and aims. The reporting of the RCT methods comply with the CONSORT statement[17] for cluster RCTs. The theoretical framework and development of the KT strategy are described in detail, applying the literature summarised in Chapter 2 to the specific context of the RCT.

Chapter 4 – Randomised Controlled Trial Results

Chapter 4 presents a statistical analysis of the data obtained from the RCT. Participant flow through the study and results for the primary and secondary outcomes are detailed.

Chapter 5 – 2-year Follow-up Study Methods

Chapter 5 begins by describing the relationship between the RCT and the follow-up study, and the flow of participants throughout the 2-year period. The survey methods and process undertaken to address the hypotheses and research questions are detailed.

Chapter 6 – 2-year Follow-up Study Results

Chapter 6 presents the survey results from the follow-up study according the study hypotheses. Interpretation of these results is provided in Chapter 7.

Chapter 7 – Discussion

Chapter 7 provides interpretation and implications of the RCT and follow-up study, and describes how these studies have contributed to the KT evidence base. Strengths and limitations of each study are detailed. The chapter finishes by providing recommendations for organisations wanting to implement KT strategies, and future research directions.