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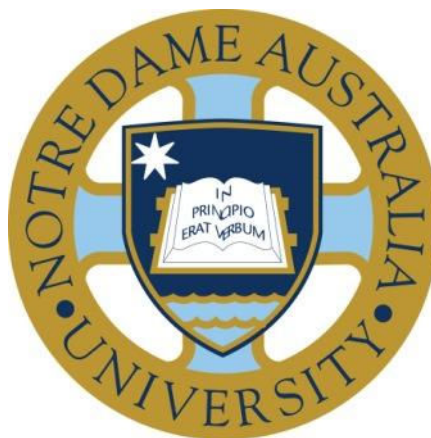


Knowledge Translation Intervention to Improve Evidence-Based Practice Behaviour of Allied Health Professionals

**A cluster randomised controlled trial
and 2-year follow-up study**

Lanie Campbell

Bachelor of Applied Science Speech Pathology (1991)



**A thesis submitted for the degree of
Doctor of Philosophy at**

**University of Notre Dame Australia
November 2013**

Declaration

This thesis is composed of my original work, and contains no material previously published or written by another person except where due reference has been made in the text.

The content of my thesis is the result of work I have carried out since the commencement of my research higher degree candidature and does not include a substantial part of work that has been submitted to qualify for the award of any other degree or diploma in any university or other tertiary institution. No part of my thesis has been submitted to qualify for another award.

Signature

Date

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Abstract

Background: It is difficult to foster the use of research findings among allied health professionals (AHPs). Tailored, multifaceted knowledge translation (KT) strategies are now recommended but are resource intensive to implement. Employers need effective KT solutions, but little is known about: (a) the impact and viability of multifaceted KT strategies using an online KT tool, (b) their immediate and longer-term effectiveness with AHPs, and (c) their effect on evidence-based practice (EBP) decision-making behaviour. The aim of this project was to measure the effectiveness of a multifaceted KT intervention including a customised KT tool, to change EBP behaviour, knowledge and attitudes of AHPs over an 8-week period and at 2-years.

Methods: The first study was an evaluator-blinded, cluster randomised controlled trial (RCT) conducted in a community-based cerebral palsy service. AHPs (135 physiotherapists, occupational therapists, speech pathologists, psychologists and social workers) from 4 regions were cluster randomized (n = 4), to either the KT intervention group (n = 73) or the control group (n = 62), using computer-generated random numbers, concealed in opaque envelopes, by an independent officer. The KT intervention included a 3-day skills training workshop and workplace support to redress barriers (paid EBP time, mentoring, system changes and access to an online research synthesis tool). Primary RCT outcome (self- and peer-rated EBP behaviour) was measured using the Goal Attainment Scale (individual level). Secondary RCT outcomes (knowledge and attitudes) were measured using exams and the Evidence Based Practice Attitude Scale.

The second study was a follow-up study 2-years after the completion of the RCT using an online survey. The survey included: (a) questions based on Goal Attainment Scale, and (b) questions relating to the utilisation and usefulness of an evidence alert system.

Results RCT - the intervention group's primary outcome scores improved relative to the control group, however when clustering was taken into account, the findings were non-significant: self-rated EBP behaviour [effect size 4.97; 95% confidence interval (CI)-10.47, 20.41; $p = 0.52$]; peer-rated EBP behaviour (effect size 5.86; 95% CI-17.77, 29.50; $p = 0.62$). Statistically significant improvements in EBP knowledge were detected (effect size 2.97; 95% CI 1.97, 3.97; $p < 0.0001$). Change in EBP attitudes was not statistically significant. Two-year follow-up study - AHPs' KT strategy GAS T-scores improved (GAS T-score change from RCT to 2-years = 29.58; 95%CI 12.66, 46.52; $p = 0.02$).

Conclusions The two studies suggest meaningful gains in EBP behaviour, with consistent GAS peer-ratings and self-ratings in the RCT, along with an overall increase in GAS T-scores in the 2-year follow-up study. This cannot be stated with certainty however, due to methodological issues due to pragmatic constraints. The large variability in behaviour observed between clusters suggests barrier assessments and subsequent KT interventions may need to target subgroups within an organisation.

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Abbreviations

AHP	allied health professional
CI	confidence interval
EAS	evidence alert system
EBM	evidence-based medicine
EBP	evidence-based practice
EBPAS	evidence-based practice attitude scale
GAS	goal attainment scaling
ICC	intra-cluster correlation co-efficient
KT	knowledge translation
KTA	knowledge-to action
NEAF	national ethics application form
OTseeker	occupational therapy systematic evaluation of evidence
PEDro	physiotherapy evidence database
RCT	randomised controlled trial
sd	standard deviation
SpeechBITE	speech pathology database for best interventions and treatment efficacy