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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 5

2-YEAR FOLLOW-UP STUDY

METHODS

Overview

This chapter details the methods of follow-up study 2-years after a multifaceted knowledge KT strategy was introduced to improve AHPs' EBP behaviours, and includes:

- 1) Background information
- 2) Aims and hypotheses specific to the 2-year follow-up study
- 3) Trial design
- 4) Setting and eligibility criteria
- 5) Ethical approval
- 6) Procedures
- 7) Statistical analysis.

Background

Although AHPs EBP behaviours are known to take time to develop,²³ few studies seek to measure longer term effectiveness of KT strategies.^{4,173,196} Measuring the impact of KT strategies at different points in time is important as behaviour change may not be immediate and may not change in a linear fashion. Measuring EBP behaviour over time may be particularly important if the strategies involved policy changes and organisational initiatives¹⁹⁶ as these KT strategies may change behaviour indirectly by gradually changing culture and attitudes.¹⁹⁷ Even if a KT strategy did result in immediate or behaviour change, it is recommended that longitudinal data be collected to ensure that the behaviour has been maintained.¹⁷³

A RCT was conducted with AHPs working at the Cerebral Palsy Alliance between June and August 2009 (see Chapters 3 and 4). Participants were cluster randomised to either the KT intervention group (KT strategy) or the control group (communication skills). EBP behaviours were measured using Goal Attainment Scaling at baseline and 8-weeks (primary endpoint). Immediately after the RCT primary endpoint, each group received the alternative intervention (see Figure 14), with the KT intervention group receiving the communication skills intervention and the control group receiving the KT intervention. Therefore the 2-year follow-up study is of one-group not two-groups, with some of the participants having 8-weeks less experience of using the KT strategies. We therefore are not looking for between group differences, instead all participants were seen as having had roughly equal exposure to the KT intervention long-term.

Aims and hypothesis

The primary aim of the follow-up study was to measure the effectiveness of a KT strategy on AHPs' EBP behaviours 2-years after the KT strategy was implemented. Secondary aims were to determine the level of utilisation, patterns of use and opinions regarding usefulness of the EAS. The hypothesis for the primary aim of the follow-up study was:

- 1) Allied health professionals' 2-year post KT strategy GAS T-scores will be equal to, or statistically significantly greater than the 8-week GAS scores.

In addition to this hypothesis, the study sought to answer research questions regarding the EBP behaviours of the cohort of AHPs working at the study organisation in November 2011.

- 2) What are GAS T-scores of AHPs working at the study site (regardless of whether they participated in the RCT or not)?
- 3) How do these GAS T-scores compare to the baseline and 8-week GAS T-scores?

Trial design

A longitudinal study was conducted 2-years after the completion of the KT strategy using an online survey (Survey Monkey™ Premium). The survey provided a snapshot in time of the EBP behaviours of AHPs at Cerebral Palsy Alliance. The survey included the same questions based on GAS as used in the RCT, and some additional questions relating to the utilisation and usefulness of the EAS (see Appendix 8). An online survey was ideal as GAS questions easily translated from the paper format used in the original RCT to electronic format offered on Survey Monkey™ Premium. Survey Monkey™ was frequently used within the Cerebral Palsy Alliance for other surveys, and the survey participants were therefore familiar with the layout and style of the survey.

Survey Design

The survey questions were designed ensuring clear wording, grammar and layout.¹⁹⁹⁻²⁰¹ A covering letter was provided including information about the present study along with contact details if any questions arose²⁰¹ (see Appendix 8). The survey was confidential and de-identified so that response collectors were unable to re-identify survey participants except by codename. Possible security breaches regarding confidentiality were reported as problematic with online surveys,²⁰² especially via email, however Survey Monkey provided a high level of security.

The survey comprised of 3 sections:

- 1) Demographic information that mirrored the information collected in the original RCT
- 2) GAS questions that were included in the original RCT. Two additional GAS goals were formulated by the expert panel and added at the end of the survey. These goals were developed in response to feedback from clinical seniors and managers regarding AHPs' use of outcome measures. Our original goals questioned whether valid, reliable

outcome measures were being used. The additional questions explored whether outcome measures were being scored completely and documented thoroughly.

- 3) Questions relating to the EAS. These questions were based on categories designed to evaluate the McMaster Plus web-based EBP library.²⁰³ The categories aimed to collect information on:
 - *utility of the EAS*, whether survey participants found what they were looking for
 - *use of the EAS*, what the purpose of obtaining information from the EAS was
 - *usefulness of the EAS*, whether the survey participants found the information clinically useful.

Pilot testing

The online survey was pilot tested with five research staff (qualified AHPs employed as research assistants) and five untrained volunteers.²⁰¹ Feedback was sought regarding time taken, ease of use, difficulties understanding wording or grammatical suggestions, flow and order of the survey and any technical difficulties and appearance of the survey.

Eligibility

All AHPs at Cerebral Palsy Alliance were invited to participate in the present study (the RCT cohort, see Chapter 3). This included both the control and experimental groups from the original RCT because after the RCT each group then received the alternative intervention to ensure equal educational exposure for all staff (see Figure 14).

Inclusion criteria:

- 1) qualified AHPs
- 2) employed at the study site
- 3) providers of direct clinical services to people with cerebral palsy and their families.

Exclusion criteria:

- 4) managers (staff without any clinical caseload)
- 5) staff members without a formal allied health university qualification, such as project officers or welfare workers.

Ethics

The original RCT ethics application included the 2-year follow-up of the RCT and as previously described was approved.

Procedures

Eligible participants were invited to participate in the study via an email sent by a senior staff member of the Cerebral Palsy Alliance. The email included a web link to the online survey. The participants had 4 weeks to complete the survey. Two email reminders were sent after 2 weeks and 3 days before the primary endpoint date, as reminders are known to increase survey response rate.²⁰⁴⁻²⁰⁷ The participants were asked their original codename and if they had forgotten it, were provided with a list of the codenames to assist recall.

Statistical analysis

Data analysed are summarised in Table 11. Data analysis included: (1) descriptive statistics to summarise baseline characteristics of survey participants who also were a part of the original RCT, and all eligible survey participants, (2) calculation of differences between 8-week/2-year characteristics for participant who were involved in the RCT - chi-squared test, (3) calculation of mean GAS T-scores, standard deviations and range of all eligible AHP staff. Chi-squared testing was performed to explore significant differences, and regression analysis performed to measure whether the particular covariate predicted outcome.

Table 11: Data Analysed – follow-up study

Variable	Description	Outcomes
Demographic information – nominal variables		
Attendance at 2009 training	Whether or not the participant attended training held June-Nov 2009	2 (yes, no)
Cluster	The cluster at CP Alliance where the participant works	4
Profession	Professional qualification gained at university (if any)	6 (SW, PT, OT, SP, Psych, other)
Role	Job title/role at CP Alliance	9 (SW, PT, OT, SP, Psych, FT, manager, pathways, other)
Grade Level	Grade/level that the participant is employed as at CP Alliance (may be a different role e.g. Manager)	8 (level 1,2,3,4,5,manager, team leader, other)
Previous continuing education in evidence-based medicine	Whether the participant has attended EBP workshops (including 2009 training)	2 (yes, no)
Previous continuing education in communication skills	Whether the participant has attended workshops in communication skills (incl 2009)	2 (yes, no)
Engl. first language?	Whether English is the participant's first language	2 (yes, no)
Access to the EAS*	How often the participant accesses the EAS	5 (daily, 1-4 times/wk, 1-4 times/mth, 1-4 times/yr, never)
EAS content*	Whether the participant normally finds what they are looking for on the EAS	4 (yes, no, sometimes, don't look for specific info)
EAS content usefulness*	The participant's opinion of usefulness of information on EAS	5 (almost always useful, often useful, occasionally useful, rarely useful, never useful)
Purpose for using EAS*	Purpose for using the EAS	4 (information for client, general interest, conference etc, service planning)
Demographic information – continuous variables		
Employment years	How many years the participant has been employed by the organisation	Any number – expressed to 2 decimal places
Disability experience	How many years' experience the participant has had in the disability field	Any number – expressed to 2 decimal places
Outcome measures – continuous variables		
EBP GAS T-scores	The GAS score (or T-score) is calculated using a formula devised by the original authors (Kiresuk and Sherman 1968). It has a mean of 50 and a SD of 10.	A numerical value to 5 decimal places

Calculating change in GAS T-scores

The 8-week and 2-year EBP self GAS T-score means were compared using paired t-tests (significance set at 0.05) and 95% CIs calculated. Only staff members who were participants in the RCT were included in this analysis.

Missing data

It was anticipated that there would be missing data at the 2-year mark due to staff changes and response rate of the follow-up survey. Missing data were excluded from the analysis.

Synopsis

This chapter provided information about the methods used in the 2-year follow-up study and included details of the design of the study, pilot testing, setting and participants, eligibility criteria, ethics, procedures and data analysis. The following chapter will present the results from the follow-up study. Discussion and interpretation of the follow-up study are included in the final chapter of the thesis (Chapter 7).