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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 6

2-YEAR FOLLOW-UP STUDY

RESULTS

Overview

This chapter presents the results from the 2-year follow-up study and has 2 components.

- 1) Results from the follow-up study relating to all survey participants.
This related to the research questions:
 - What are GAS T-scores of AHPs working at the study site?
 - How do these GAS T-scores compare to the RCT baseline and 8-week GAS T-scores?

- 2) Results from follow-up study relating to survey participants who were a part of the RCT as well as the follow-up study. This related to the hypothesis: AHPs' 2-year post KT strategy GAS T-scores will be equal to, or statistically significantly greater than the 8-week GAS scores.

Survey results – all survey participants

Participant flow & baseline characteristics

There were 147 AHPs working at Cerebral Palsy Alliance at the time of the survey (November 2011). Sixty-five AHPs responded, representing 44% of the sampling frame. Table 12 details the survey participants' baseline characteristics.

Table 12: Survey participants' baseline characteristics (n = 65)

Characteristic	n (%)
Profession	
Physiotherapist	13 (20)
Speech Pathologist	18 (27.7)
Occupational Therapist	17 (26.2)
Psychologist	5 (7.7)
Social Worker	5 (7.7)
Other	7 (10.8)
Grade level	
Level 1	14 (21.5)
Level 2	34 (52.3)
Level 3	12 (18.5)
Other	5 (7.7)
Missing	0
Years at Cerebral Palsy Alliance	
<1 year 11months	16 (24.6)
2-4 years 11months	16 (24.6)
5-9 years 11 months	8 (12.3)
>10 years	25 (38.5)
Years' experience in disability field	
<1 year 11months	1 (1.5)
2-4 years 11months	12 (18.5)
5-9 years 11 months	14 (21.5)
>10 years	38 (58.5)
Previous continuing education in evidence-based practice?	
Yes	59 (90.8)
No	6 (9.2)
Is English your first language?	
Yes	62 (95.4)
No	3 (4.6)
Cluster	
Cluster 1	16 (24.6)
Cluster 2	21 (32.3)
Cluster 3	17 (26.2)
Cluster 4	11 (16.9)
Total n (%)	65 (100)

Comparison to all staff at Cerebral Palsy Alliance

The only information available for all staff at Cerebral Palsy Alliance was professional group and cluster. The test for one proportion²⁰⁸ was performed

to test for differences in proportion between the survey participants and all AHPs working at Cerebral Palsy Alliance.

There were no significant differences in proportions of physiotherapists or speech pathologists. There were however, statistically significant differences ($p > 0.05$; see Table 13) in the proportions of occupational therapists, psychologists and social workers. There were no significant differences in proportions between clusters ($p > 0.05$; see Table 13).

Table 13: Survey respondents' professional backgrounds

	Survey participants (n = 65)	All allied health staff at Cerebral Palsy Alliance Nov 2011 (n = 147)	p value
Profession			
Physiotherapist	13 (20)	35 (23.8)	0.51
Speech Pathologist	18 (27.7)	41 (27.9)	0.85
Occupational Therapist	17 (26.2)	65 (44.2)	0.01
Psychologist	5 (7.7)	4 (2.6)	0.01
Social Worker	5 (7.7)	2 (1.3)	0.001
Other	3 (4.6)	—	—
Cluster			
Cluster 1	16 (24.6)	36 (24.5)	0.79
Cluster 2	21 (32.3)	41 (27.9)	0.61
Cluster 3	17 (25.7)	35 (23.8)	0.90
Cluster 4	11 (16.9)	35 (23.8)	0.07

Results relating to Evidence Alert System

Results from survey questions relating to the frequency and type of use of the EAS are detailed in Table 14. Due to pragmatic constraints we were unable to compare web page hits from the RCT period to 2-year data as the EAS was made available to all 1050 non-AHP Cerebral Palsy Alliance staff immediately after the RCT was completed. This meant that non-AHPs also used the EAS and we were therefore unable to extract accurate data for AHPs only. The follow-up survey therefore included 4 questions about use and usefulness of the EAS (see Appendix 8).

Table 14: Evidence Alert System survey question results (n = 65)

Question	Percent
How often do you access the knowledge hub (intervention section with evidence levels, assessment, prognosis/prevalence or clinical algorithms)?	
Every day	0
1-4 times/week	25
1-4 times/month	36.5
1-4 times/year	32
Never	6.5
Do you normally find what you are looking for?	
Yes	30.8
No	6.4
Sometimes	48.7
I browse rather than looking for specific information	14.1
Is the information you find on the knowledge hub useful?	
Almost always useful	15.2
Often useful	46.8
Occasionally useful	27.8
Rarely useful	8.9
Never useful	1.3
For what purpose do you access the knowledge hub?	
Information seeking with a specific client(s) in mind	76
General interest (not related to a specific client)	61.3
Presentation at conference, seminar, team meeting	24
Service planning	42.7

RCT follow-up study

Participant flow

There were 65 survey participants, 25 of whom were also participants in the 2009 RCT. De-identified data obtained from Human Resources indicated that 63/135 RCT participants had resigned from their positions at Cerebral Palsy Alliance between November 2009 and November 2011. This meant that 35% of the original participants in the RCT who still worked at Cerebral Palsy Alliance responded to the survey. Figure 14 illustrates the flow of participants from June 2009 to November 2011.

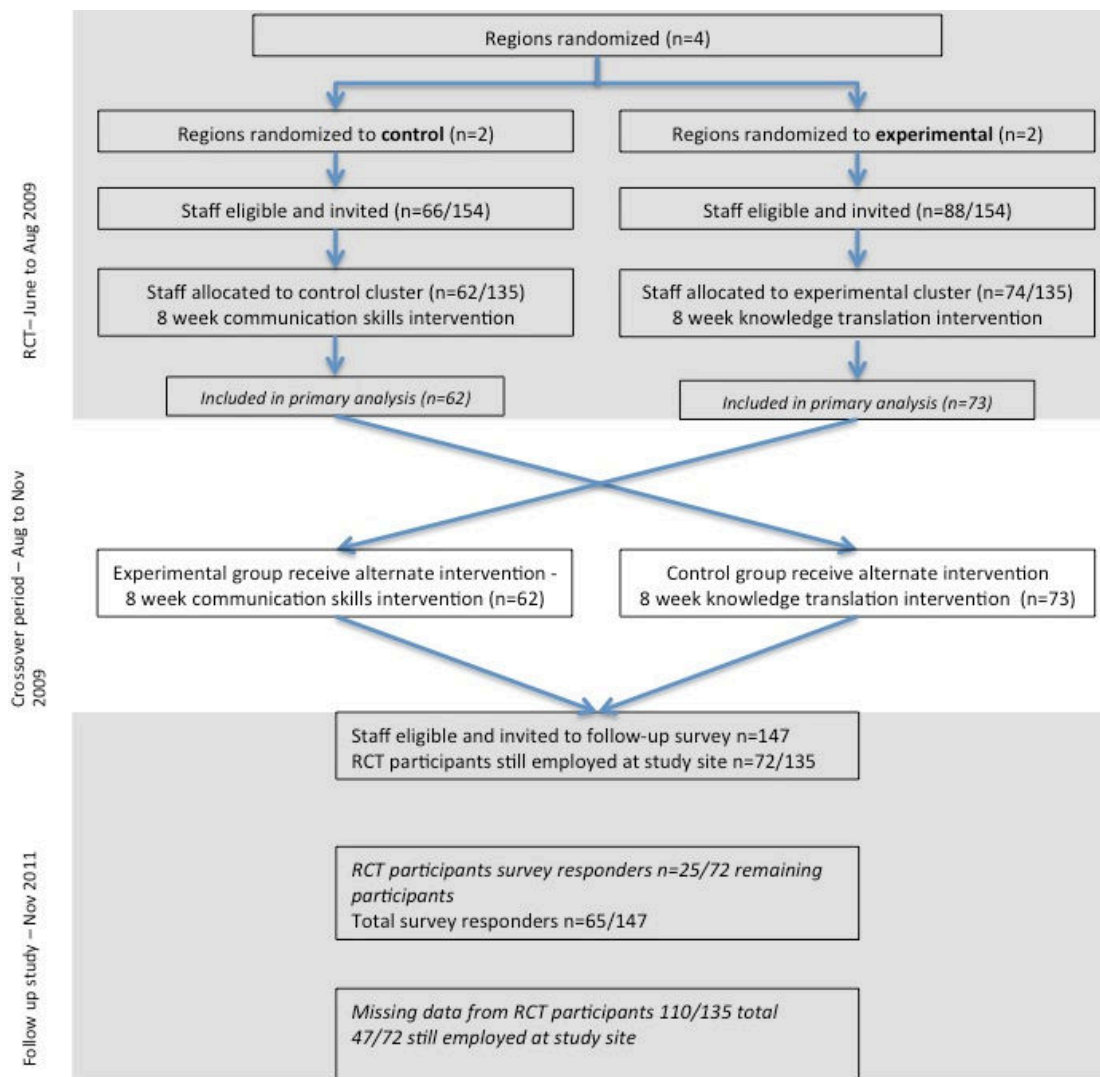


Figure 14: Participant flow throughout entire study

Baseline characteristics

Descriptive statistics were used to summarise participant characteristics (see Table 15).

Profession

Included professionals were physiotherapists (24%), speech pathologists (20%), occupational therapists (36%), psychologists (8%) and social workers (12%). Table 15 displays the proportion of each profession at 8-weeks (n = 135 AHPs) and 2-years (n = 25 AHPs). The professional background of

participants was comparable between the 8-week group and 2-year group (see Table 15 for p values, indicating that there was no statistically significant difference of the distribution of professional background of participants between groups).

Grade level

At the 2-year mark, 20.8% of the sample were employed at the Cerebral Palsy Alliance as grade 1 AHPs, 50% were grade 2 (clinical specialist), 20.8% were grade 3 (clinical senior) and the remaining 8.4% were either consultants or clinical managers. The distributions between the 8-week and 2-year groups were comparable (see Table 15).

Years at Cerebral Palsy Alliance and years in disability

Forty-four per cent of respondents at the 2-year mark had worked for Cerebral Palsy Alliance for less than 2-years, and 20% had worked at the organisation for more than 10-years. Interestingly, 44% of respondents had over 10-years' experience in the disability sector. These percentages mirrored the proportions in the 8-week group, with no statistically significant differences found (see Table 15).

Previous EBP training

Seventy-two per cent of respondents in the 2-year group indicated that they had participated in some form of evidence-based practice training, compared to 88% in the 8-week group. Seven respondents did not complete this question (missing data) in the survey. It can be assumed that all respondents in this group (n = 25) have had previous EBP training as they all attended the EBP workshops as a part of the RCT. P values were therefore not calculated for this variable.

English as first language

Ninety-six per cent of the 2-year group had English as their first language compared to 91% in 8-week group. These proportions were not significant (see Table 15).

Table 15: Participant characteristics (RCT participants) – follow-up study

	n (%)		p value*
	8-weeks (n = 73)	2-years (n = 25)	
Profession			
Physiotherapist	16 (22.0)	6 (24.0)	0.81
Speech Pathologist	20 (27.4)	5 (20.0)	0.41
Occupational Therapist	23 (31.4)	9 (36.0)	0.62
Psychologist	7 (9.6)	2 (8.0)	0.79
Social Worker	7 (9.6)	3 (12.0)	0.68
Missing	0	0	—
Grade level			
Level 1	19 (26)	5 (20.0)	0.55
Level 2	34 (46.6)	12 (48.0)	0.73
Level 3	13 (17.8)	5 (20.0)	0.70
Other	6 (8.2)	2 (8.0)	0.13
Missing	1 (1.4)	1 (4.0)	1.0
Years at Cerebral Palsy Alliance			
<2-years	28 (38.4)	11 (44.0)	0.57
2-4 years 11 months	15 (20.5)	4 (16.0)	0.57
5-9 years 11 months	21 (28.8)	5 (20.0)	0.33
>10 years	9 (12.3)	5 (20.0)	0.13
Missing	0	0	—
Years' experience in disability field			
0-2 yrs	11 (15.0)	5 (20.0)	0.48
2-5 yrs	10 (13.7)	4 (16.0)	0.74
5-10 yrs	25 (34.3)	5 (20.0)	0.13
10+ yrs	27 (37.0)	11 (44.0)	0.47
Missing	0	0	—
Previous continuing education in evidence-based practice?			
Yes	64 (87.7)	18 (72.0)	—
No	9 (12.3)	—	—
Missing n = * (%)	0	7 (28.0)	—
Is English your first language?			
Yes	66 (90.4)	23 (95.8)	0.36
No	7 (9.6)	1 (4.2)	0.36
Missing	0	1 (4.2)	—

* p values were calculated by using the Test for One Proportion.²⁰⁸

Long-term effectiveness of KT strategy

Comparison of means – RCT participants

Eight-week and 2-year mean Goal Attainment Scaling (GAS) T-scores were compared using paired t-tests (see Table 16). Samples compared were participants who were a part of the RCT KT intervention group at 8-weeks as well as participants at the 2-year mark (n = 19). Of the 25 survey participants who were RCT participants, n=19 were a part of the original KT intervention group, and n=6 were a part of the control group. The mean 8-week GAS T-score was 60.71 compared to the 2-year GAS T-score of 90.29.

Table 16: GAS T-score 8-week to 2-year comparison (n = 19)

	GAS mean T-score	sd	Mean change	95% CI	p value
8-weeks after KT strategy	60.71	19.10	—	—	—
2-years after KT strategy	90.29	21.89	29.58	12.66–46.50	0.02

Comparison of means based on attendance at 2009 EBP training

Survey participants who attended EBP training, regardless of whether they agreed to participate in the RCT (n = 31) had a mean GAS T-score of 93.57, compared to those who were new staff whose GAS T-score of 82.45 (see Table 17). A one-sample t-test indicated that the mean difference between GAS T-scores was significant (p = 0.00). A regression analysis was performed to see if attending the 2009 EBP training was predictive of GAS T-score outcome. The finding was confirmed with an effect size of 11.12 (95% CI 1.86, 20.38; p = 0.019).

Table 17: GAS T-score comparison based on attendance at original EBP training

	GAS mean T-score	sd	95% CI of the difference	p value
Respondents who had not attended 2009 EBP training (n = 34)	82.45	15.65	75.68–89.21	—
Respondents who had attended 2009 EBP training (n = 31)	93.57	18.65	87.52–99.61	0.001

Evidence-based practice behaviours of survey participants according to cluster

The mean GAS T-score for all survey participants was 89.44 (sd 18.29). This is in contrast to the baseline GAS T-scores (prior to the RCT) of 54.05 (sd 13.81) and the 8-week KT intervention group GAS T-score (and the end of the RCT – primary endpoint) of 65.96 (sd 13.49). Respondents from cluster 4 were the highest performers, and cluster 3 were the poorest performing cluster at the 2-year mark with mean GAS T-score of 78.68 (see Table 18).

Table 18: GAS T-score according to original cluster

Cluster	GAS mean T-score
Cluster 1 (n = 16)	91.15
Cluster 2 (n = 21)	95.94
Cluster 3 (n = 17)	78.68
Cluster 4 (n = 11)	96.42

Synopsis

This chapter presented the results from the 2-year follow-up study. The participant flow and results relating to all survey participants were presented first. Secondly, the flow of participants and results relating to participants who were in the original RCT as well as the 2-year survey were presented. Discussion and interpretation of these results are included in the following chapter, along with strengths, limitations, recommendations and conclusions for the entire project.