

Association between therapist attributes, implementation fidelity and return-to-work outcomes in the RETake to work After stroke (RETAKE) trial



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Background

Understanding which therapist attributes affect intervention fidelity and patient outcomes is important for contextualising intervention effectiveness [1-3] . It may also inform implementation of interventions in future research and clinical practice. In this study, we aimed to explore the relationships between Occupational Therapists’ (OTs) attributes, their faithful delivery of an early, stroke-specialist vocational rehabilitation intervention (ESSVR) and stroke survivor return-to-work (RTW) outcomes.

Methods

Thirty-nine OTs were surveyed about their previous experience and knowledge and trained to deliver ESSVR. ESSVR was delivered across 16 sites in England and Wales between February 2018 and November 2021. OTs received monthly mentoring to support faithful ESSVR delivery. The amount of mentoring each OT received was recorded. Fidelity was assessed using an intervention component checklist completed through retrospective case review of one randomly selected stroke survivor per OT. Linear and logistic regression analyses explored relationships between OT attributes, fidelity, and stroke survivor RTW outcome.

Attributes	<i>β</i>	95% Confidence Interval	<i>p</i>
Experience (years) of			
Qualified as an OT	0.28	-0.52 - 1.07	0.49
Stroke rehabilitation	0.41	-0.48 – 1.28	0.36
Vocational rehabilitation	-0.29	-1.89 – 1.31	0.72
Knowledge			
Level of education	1.61	-9.34 – 12.55	0.77
Theoretical knowledge of VR	6.95	-5.55 – 19.45	0.27
Recent research experience	11.14	-4.86 – 27.14	0.17
Initial competence	6.44	-7.0 – 19.89	0.34
Engagement			
Amount of mentoring received pre-fidelity case	0.01	-0.01 – 0.03	0.43
Amount of mentoring received during fidelity case	0.29	0.05 – 0.53	0.02*

**p*<0.05
Table 1. The relationships between OT attributes and fidelity assessment score

Attributes	Odds Ratio	95% Confidence Interval	<i>p</i>
Experience (years) of			
Qualified as an OT	1.1	1.0 – 1.2	0.07
Stroke rehabilitation	1.16	1.02 – 1.32	0.03*
Vocational rehabilitation	1.19	0.99 – 1.45	0.08
Knowledge			
Level of education	1.58	0.51 – 4.92	0.43
Theoretical knowledge of VR	0.82	0.22 – 3	0.76
Recent research experience	0.59	0.1 – 3.49	0.56
Engagement			
Amount of mentoring received pre-fidelity case	1.0	1 - 1	0.16
Amount of mentoring received during fidelity case	1.03	1 – 1.07	0.6
Fidelity			
Fidelity assessment score	1.06	1.01 – 1.1	0.02*

**p*<0.05
Table 2. The relationships between OT attributes and stroke survivor RTW status

Results

Fidelity scores ranged across OTs from 30.8%-100% (Mean: 78.8%, SD: 19.2%). Only the amount of OT engagement in mentoring during their randomly selected case for fidelity assessment was significantly associated with fidelity ($\beta = 0.29$, 95% CI = 0.05-0.53, $p < 0.05$; see Table 1). Increasing years of stroke rehabilitation experience (OR=1.17, 95% CI [1.02, 1.35]) and increasing fidelity assessment score (OR=1.06, 95% CI [1.01, 1.1]) was associated with an increase in the likelihood of returning to work (see Table 2).

Conclusion

Findings of this small study suggest that offering mentoring to OTs may increase fidelity of delivery of the intervention, and that this may be associated with positive stroke survivor RTW outcomes. The results also suggest that OT with more experience of stroke rehabilitation may be able to more effectively support stroke survivors to RTW. Upskilling OTs to deliver complex interventions, like ESSVR, in clinical trials may require mentoring support in addition to training to ensure fidelity.

References: [1] Carroll, C., Patterson, M., Wood, S., et al. (2007). A conceptual framework for implementation fidelity. *Implementation Science*, 2(1), 1-9. [2] Damschroder, L., Aron, D., Keith, R., et al. (2009). Fostering Implementation of Health Services Research Findings into Practice: A Consolidated Framework for Advancing Implementation Science. *Implementation Science*, 4, 50. [3] Hasson, H. (2010). Systematic evaluation of implementation fidelity of complex interventions in health and social care. *Implementation Science*, 5(1), 67.