Effects of postgraduate EBP training on Speech-Language Therapists' motivation and competency

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Background: study design

Part of ongoing research project, with aims:

- To determine the current level of EBP competency and motivational beliefs of health care students and lecturers.
- To examine associations of EBP competency and motivational beliefs.
- To evaluate differences in EBP competency and motivational beliefs between different health care disciplines (see also Verhoef et al., this conference)



Background: EBP in SLT curriculum

Evidence-based Practice Aims (Educational outcomes)	Speech-Language Therapy (SLT) Yr Course
1 Formulate answerable questions	1 Practice based activities, Introduction principles EBP
(Ask)	2 Course: EBP
	3 Course: Critical Appraisal of a Topic (CAT-group)
	3 Internship: CAT- individual
	4 Internship/ thesis
2 Searching for evidence (Acquire)	1 Practice based activities
	2 Course: EBP
	3 CAT-group
	3 Internship: CAT-individual
	4 Internship/ thesis
3 Critical appraisal of evidence	2 Course: EBP
(Appraise)	3 CAT-group
	3 Internship: CAT-individual
	4 Clinical reasoning
	4 Internship/ thesis
4 Application of evidence in practice	3 Internship: CAT-individual
(Apply)	4 Clinical reasoning
	4 Internship/ thesis
5 Evaluation of performance (Analyze)	3 Internship: CAT-individual
	4 Internship/ thesis/ final assessment



Aims

Aim:

To determine sustainability of EBP competencies and attitudes in speech-language therapists after their graduation

Research question:

Does postgraduate training change EBP skills and/or attitude?



Methods: Participants

- Intervention as part of regular professional development cycle (6 times/yr)
- 19 members; 11 completed all measurements

	Pre-test	Post-test
Motivation questionnaire	19	12
Fresno test	17	11

- Working area: private practice (n=11), pp + school (n=1)
- Mean age: 33 yrs (sd 7,3)
- Yrs since graduation: 10,5 (sd 7,9)
- Master: n=2



Methods: intervention



- Pre-test
- 3 training sessions (2 h), 2 take home assignments (1-2 h) during 4 months
 - 1. EBP principles, Ask
 - 2. Acquire & Appraise
 - 3. Apply & Analyze*
- Goal: CAT, applicable in own daily practice
- Post-test and evaluation
 Pre-post test interval 5-8 months



^{* 4 (}of 11) practitioners were absent during the third training session

Measuring EBP skills and attitude:

Dutch Modified Fresno test (DMF) and questionnaire motivational beliefs

Kanniscantrum Zurginnovatis De Nederlandse Gemodificeerde Fresnotest voor gezondheidszerg professionals The Dutch Modified Fresno (DMF)	itabilitati en voordighelen om op een teert is ochevieren om it erntet in e en eerstel vergen wennig een wat en stellingen on in keen vang de test deen.	len von de et Dysparie	twoord op is hyppredicted zoelwinzeg bij die eerste cassel in. In derinkt dat die publische mogelijk deze vraag wut deze publische veelle sijk. Waar bij je dan in die erwerd mogelijk en beorgenenstere dit. ### CAPSCA DE CAPSTA MAGFE. ###################################	notes In Goarnakie informatie ton Use author	ist de errore casso no up past in de distalasse yeigh de sestemmen del je son yest-hain. Gest i an 13 ja walette ment grivent-cord reasono je di error, so ja wannyo. Venenkonord goli her wannyon de disolator, maak, ruden mogenija, enderschend	intercord op is laggourdische stehnnag tij de nomen. In denkt der de publicite nomplik door nomen. It geleisten aan ze volksidere ne het beinge unhet tij in sig besonderen of laere publicit in kniedskal die het de verschieden of laere publicit in kniedskal die het de verschieden of laere publicit in kniedskal	de wordeling	a voeren en/lif die vervolgens te s de formule, de wikkenset is voor we sikkets voor de bepaling van de rascht. Deze suide induceere 212	n, we siltest een poolief voorspallende waarde oorspallende waarde van een test betalwet:	g van verbale onsukkelings- ern behandeling met het rrouwbaarheldisiterval in die
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DMF test (12 items, Spek et al., 2012):

- 8 short answer questions, 3 multiple choice questions about study designs, and 1 yes/no item. First 3 items are based on 2 clinical scenarios.
- Standardized rating system, maximum total sum score 220 points.

Questionnaire on motivational beliefs (Spek et al., 2013):

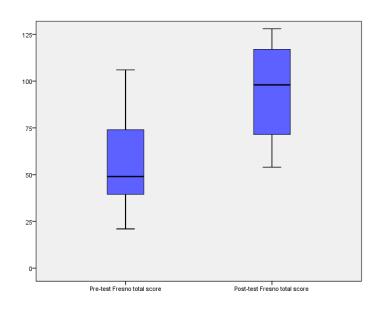
- Self-efficacy: the person's belief in his or her capacities to perform a certain task
- Task value: personal perception of the importance and utility of the task
- 7-point Likert Scale, ranging from totally disagree to totally agree





Results Fresno test

			Statistics
Scores, mean (SD)	Practitioners pre-test (n=11)	Practitioners post-test (n=11)	Wilcoxon Signed Ranks Test (pre-post)
Pico question (max. 24)	2.6 (4.7)	15.5 (4.3)	P=0.004**
Sources (max. 24)	16.6 (4.9)	16.8 (5.4)	P=0.779
Searching (max. 24)	10.5 (6.8)	13.6 (5.4)	P=0.135
Critical Appraisal (max. 72)	14.8 (10.9)	33.7 (16.3)	P=0.008**
Other (max. 52)*	11.5 (9.2)	14.0 (5.4)	P=0.562
Total scores (max. 196)*	55.9 (26.1)	93.7 (27.2)	P=0.004**





Results motivational beliefs



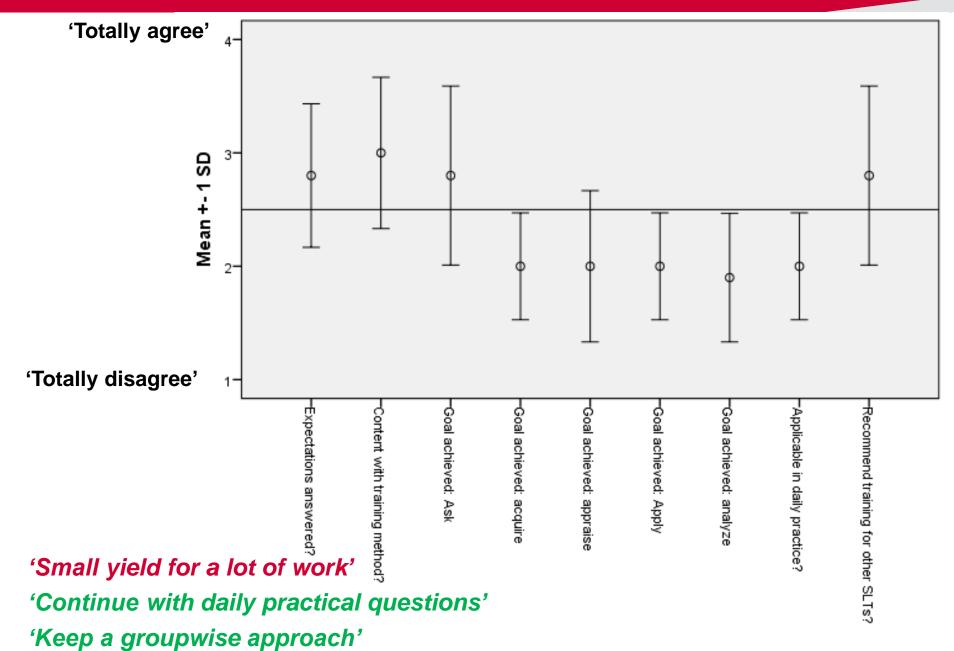
e.g. 'It is important to use EBP...'

e.g. 'I feel uncertain about EBP...'

Wilcoxon Signed Ranks test: non-significant differences



Course evaluation



Limits

- In long-term, decline in skills can be expected (see also Crabtree et al., 2012)
- Changing attitude needs (also) other strategies (eg. integration during daily work), but remains complex because of human factor in adopting innovations (Greenhalgh, 2014)
- Current measurements are not representative for 'real' EBP:
 - There is a lack of high-quality evidence in SLT (Spek, Neijenhuis et al., 2015)
 - Too much emphasis on scientific evidence



Bottom Line

Does postgraduate training change EBP skills and/or attitude?

- EBP skills improved
- EBP attitude did not change
- Daily practice is not yet changed

SLTs need:

- >To rely on/ collaborate with EBP-skilled colleagues
- More facilities, more EBP-tools
 - More high-quality evidence