

# *Do curriculum changes affect EBP competency of speech- language therapy students?*

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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 Senhaji et al., this conference)

# Background: Participants Overall (n=332)



	N	Age Mean (SD)	Gender % female
<b>LECTURERS</b>			
Occupational Therapy	18	44.8 (13.8)	89
Speech-Language Therapy	13	43.8 (8.1)	92
Physical Therapy	22	37.1 (8.4)	59
Nursing	14	51.5 (8.8)	67
<b>PROFESSIONALS</b>			
Speech-Language Therapy	17	35.0 (7.4)	100
<b>STUDENTS 4<sup>th</sup> year</b>			
Occupational therapy	30	22.0 (1.6)	97
Speech-Language Therapy	27 + 26	22.1 (1.7)	100
Midwifery	13	25.2 (6.6)	100
<b>STUDENTS 2<sup>nd</sup> year</b>			
Occupational Therapy	13	20.2 (1.7)	100
Speech-Language Therapy	17	22.6 (8.7)	100
Physical Therapy	32	22.2 (2.8)	50
Nursing	90	24.8 (7.4)	92



# Background: Need for high EBP skills in SLTs

*'The education of professionals includes an appreciation of evidence-based practice and the use of research to support clinical approaches'*

*Revised IALP Education guidelines . Folia Phoniatr Logop 2010; 62: 210-216*

*'The teaching of EBP should, as far as possible, be integrated into the clinical setting and routine care so that students not only learn the principles and skills, but learn how to incorporate these skills with their own life-long learning and patient care'*

*Sicily Statement on evidence-based practice, Dawes et al. (2005)*

- 21st century skills are needed.
- Universities of Applied Sciences should implement research skills more into the curricula (Dutch Organization of Universities of Applied Sciences, 2009)

# Aims

## Aim:

To compare EBP performance of nearly graduated SLT students before and after modification of the curriculum.

## Research question:

Does modification of the SLT curriculum change EBP skills and/or attitude?

# Methods: Participants

4th yr students SLT, just before graduation  
as bachelor of science

	<b>2013</b>	<b>2017</b>
Total Registered	56	88
Participants	27	26
%	48%	30%
Age in yrs (mean, sd)	22.2 (1.9)	22.04 (1.3)

# Modifications in SLT curriculum

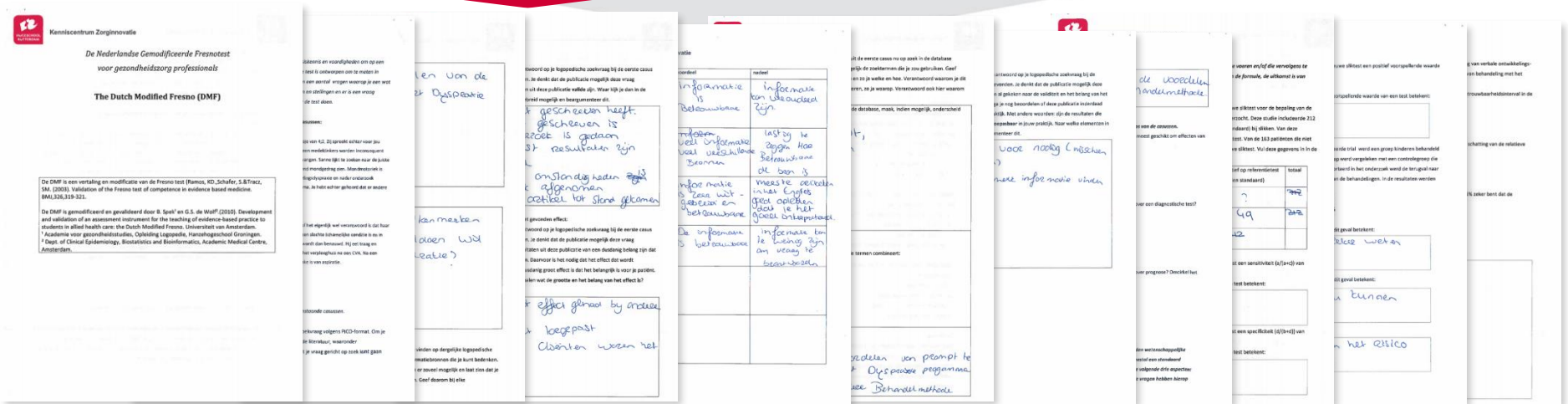
year Curriculum		Evidence-based Practice Aims*				
		1 Ask	2 Acquire	3 Appraise	4 Apply	5 Analyze
SLT 2013	1					
	2	EBP, Research Project	X	X	X	
	3	CAT, case studies	X	X	X	X
	4	Research Project group, Research Project Individual, Interview	X	X	X	X
SLT 2017	1	Lectures Information Skills (3), Intro Research (3), Intro EBP (1)	X	X		
	2	EBP, Innovation project, Research project	X	X	X	
	3	CAT-group, CAT-individual, case studies, Research Project	X	X	X	X
	4	Research Project group, Research Project Individual, Interview	X	X	X	X

Core EBP  
Research Skills  
Internship



\*Based on Sicily Statement; Dawes et al., 2005

# Measuring EBP skills and attitude: Dutch Modified Fresno test (DMF) and questionnaire motivational beliefs



## 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.

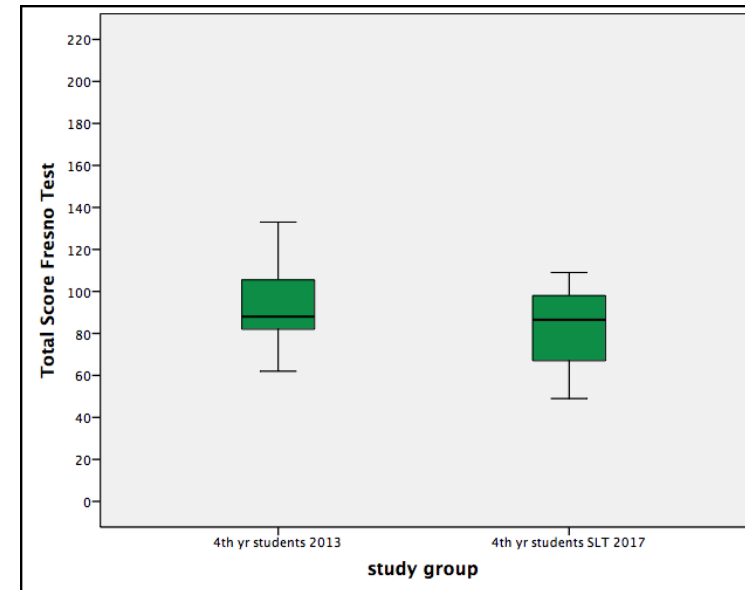
## Questionnaire on motivational beliefs (Spek et al., 2013):

- 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



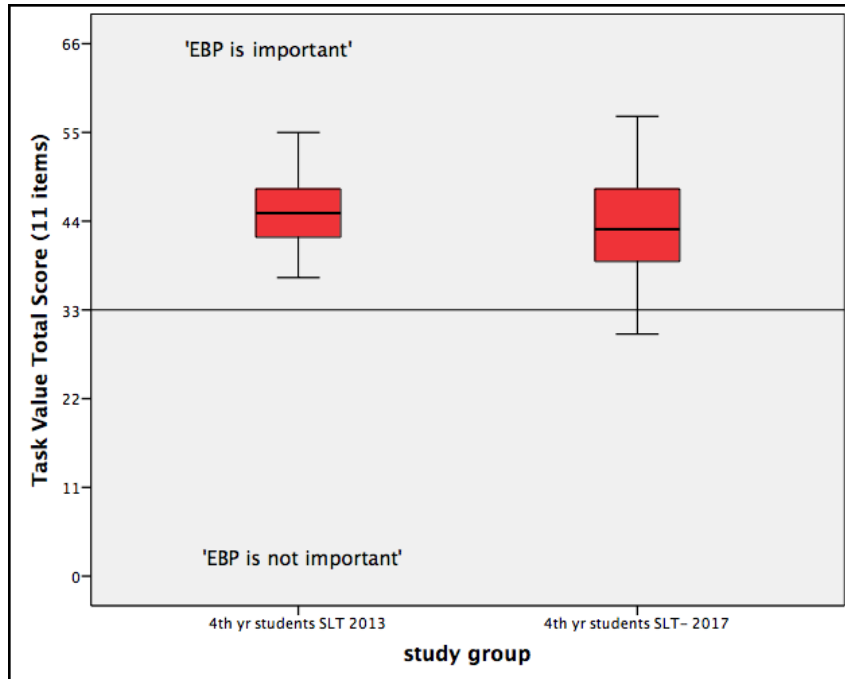
# Results Fresno test

	Scores mean (SD)		Statistics
	4th yr students 2013 (n=27)	4th yr students 2017 (n=26)	p (Mann- Whitney U)
Pico question (max. 24)	15.7 (2.8)	14.4 (3.9)	.160
Sources (max. 24)	14.7 (6.3)	18.4 (5.0)	.037
Searching (max. 24)	18.6 (4.2)	17.9 (4.0)	.421
Critical Appraisal (max. 72)	23.8 (10.5)	20.0 (10.0)	.313
Other (max. 76)	20.1 (14.4)	12.8 (7.8)	.098
Total scores (max. 220)	93.0 (18.9)	83.4 (19.1)	.210

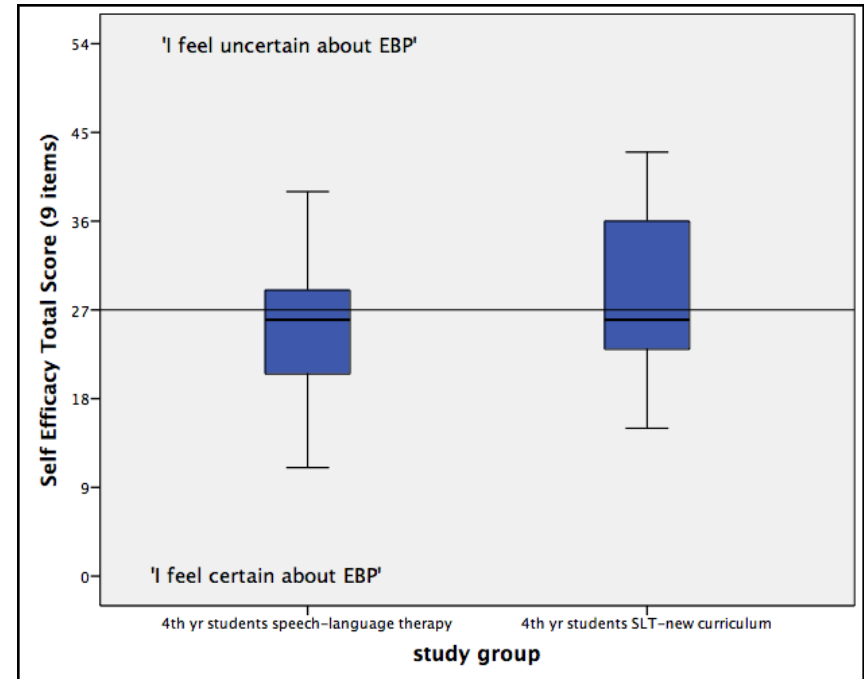


# Results motivational beliefs

## Task Value



## Self Efficacy



Mann-Whitney U: non-significant differences

# Limits

- ▶ Fresno test and questionnaire motivational beliefs provide limited data (EBP step 4 and 5 are not measured).
- ▶ There is no standard measure for level of EBP skills
- ▶ Sustainability of skills not measured, but deserves attention
- ▶ Population small; however scores comparable to Spek et al., 2012

# Bottom Line

## *Do curriculum changes affect EBP competency of speech-language therapy students?*

- EBP knowledge/ skills did not change (*exc. knowledge of sources*)
- EBP attitude did not change
  - > Modification of curriculum did not lead to differences in outcome
- We need to know how to measure 'real EBP'

