

The merit of monitoring the EBP competencies of health care bachelor students

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Innovations in Care**



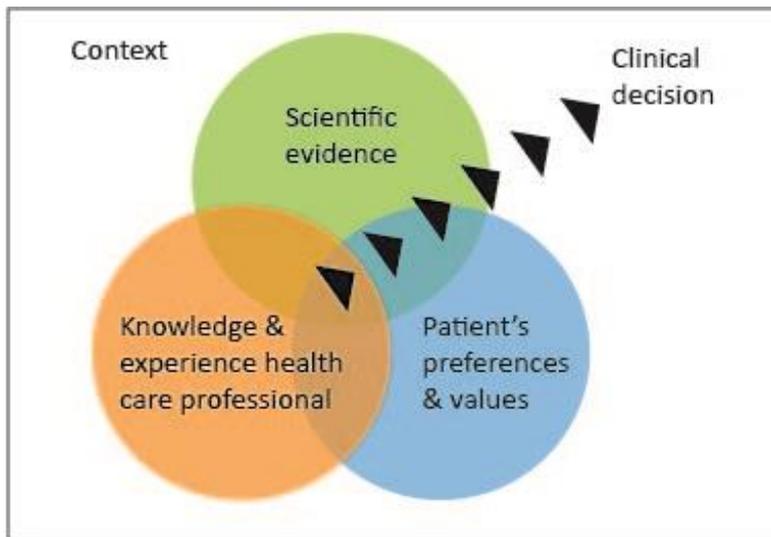
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Background: implementation of EBP in bachelor health care programs

- From isolated course (knowledge) to integration of EBP (competency)
- Research skills



BMC Medical Education 

Debate **Open Access**

Sicily statement on evidence-based practice
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Background: 5 years of studying EBP competency

Research aims:

- To determine and monitor the level of EBP competency and motivational beliefs of health care students and lecturers.
- To explore associations of EBP knowledge/ skills and motivational beliefs.
- To evaluate differences in EBP competency and motivational beliefs between different health care disciplines

Background: 5 years of studying EBP competency

Educational aims:

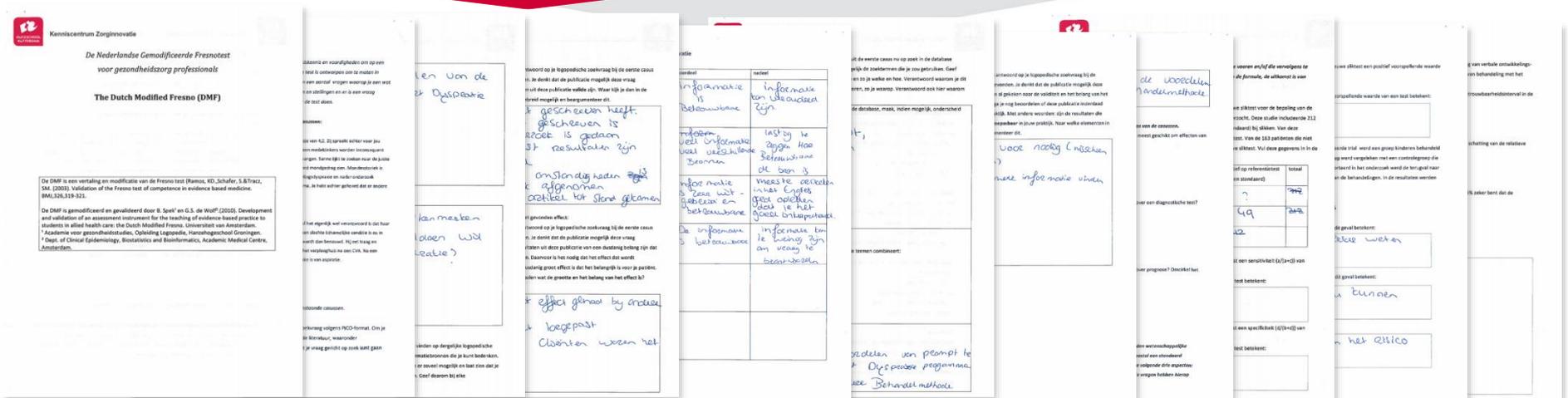
- Gather input for curriculum modifications
- Compare different health care programs

Methods: Participants (n=362)



	N	Age Mean (SD)	Gender % female
LECTURERS			
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
PROFESSIONALS			
Speech-Language Therapy	17	35.0 (7.4)	100
STUDENTS 4th year			
Occupational therapy	30 + 30	22.0 (1.6)	97
Speech-Language Therapy	27 + 26	22.1 (1.7)	100
Midwifery	13	25.2 (6.6)	100
STUDENTS 2nd year			
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

Measuring EBP competency: 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):

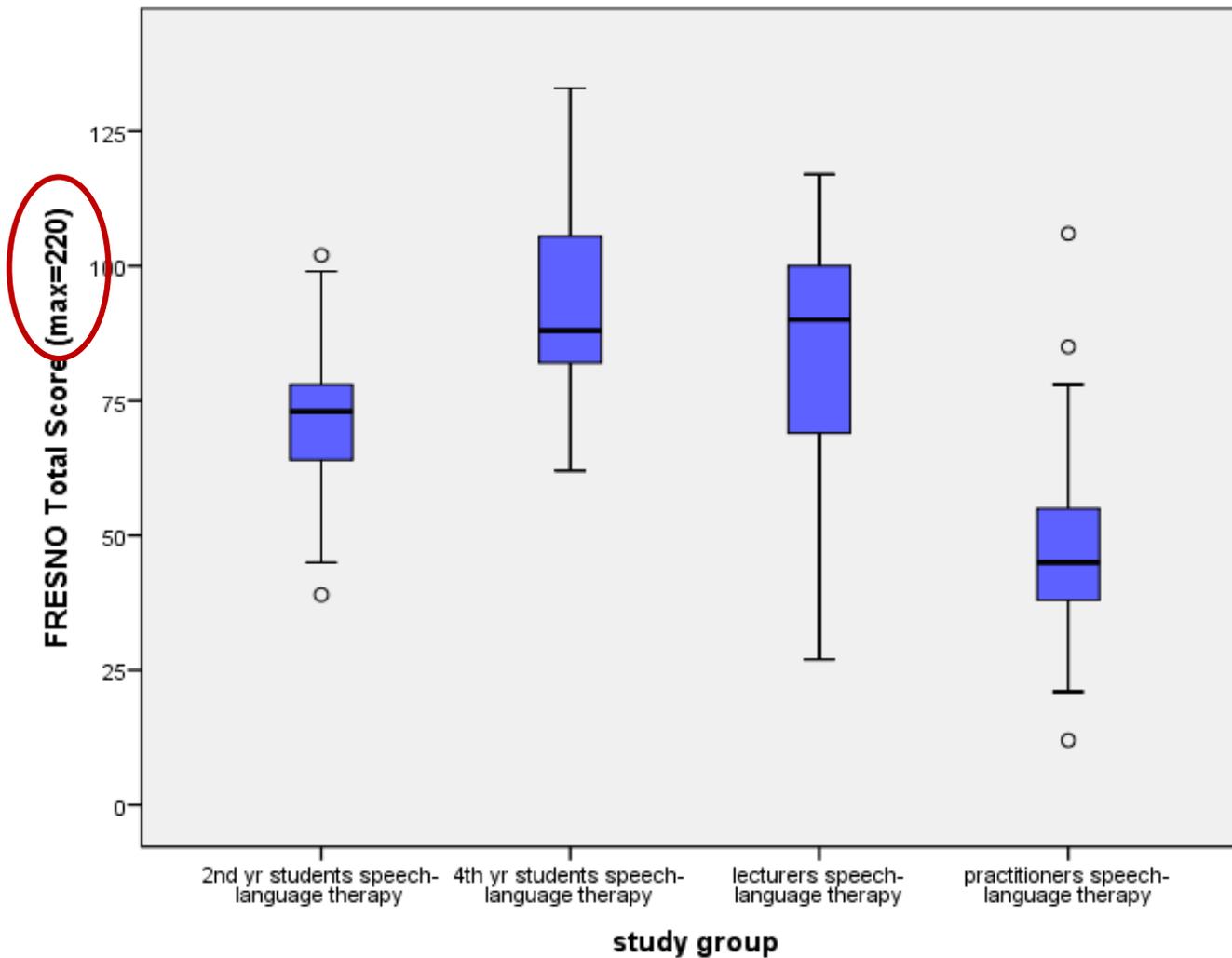
- Self-efficacy: the person's belief in his or her capacities to perform a certain task
- Task value: personal perception of the importance and utility of the task
- 7-point Likert Scale, ranging from totally disagree to totally agree

Results: levels

Study group	Study	Year	N	Pico (Max. 24) Mean (SD)	Sources (max. 24) Mean (SD)	Searching (max. 24) Mean (SD)	Appraisal (max. 72) Mean (SD)	Other (max. 76) Mean (SD)	Total scores (max. 220) Mean (SD)	Motivation Mean (SD)	
										Task Value	Self-efficacy
Lecturers	OT	2013	18	18.5 (2.8)	10.9 (7.4)	13.3 (10.1)	24.2 (13.7)	14.1 (12.3)	81.1 (32.6)	46.0 (9.0)	27.2 (11.1)
	SLT	2013	13	10.9 (5.6)	13.5 (4.9)	14.8 (5.9)	21.0 (8.9)	23.7 (14.4)	83.9 (24.8)	46.9 (4.2)	25.7 (7.5)
	PT	2015	7	11.9 (3.3)	13.3 (5.6)	19.6 (8.8)	28.9 (19.3)	38.9 (21.4)	112.4(48.4)	43.9 (5.6)	20.7 (9.7)
	Nursing	2014	14	10.9 (4.0)	17.9 (6.5)	18.2 (5.3)	24.4 (10.1)	16.6 (11.9)	88.0 (24.3)	47.9 (5.2)	24.2 (9.9)
Student 2nd yr	OT	2013	13	18.5 (2.7)	14.4 (5.6)	14.1 (3.5)	19.2 (13.4)	10.0 (9.7)	76.1 (14.9)	41.9 (4.1)	29.7 (6.6)
	SLT	2013	17	13.3 (4.8)	12.1 (5.3)	14.1 (5.4)	17.6 (9.0)	15.4 (10.2)	72.4 (17.4)	44.6 (4.9)	34.3 (8.1)
	PT	2015	32	8.9 (3.9)	10.5 (5.2)	14.0 (6.1)	14.5 (10.2)	16.0 (10.6)	63.8 (23.9)	42.3 (6.0)	37.2 (8.6)
	Nursing	2016	91	7.9 (3.0)	13.5 (5.5)	16.0 (5.5)	20.5 (10.7)	13.1 (6.2)	69.3 (14.3)	19.9 (7.2)	22.9 (10.5)

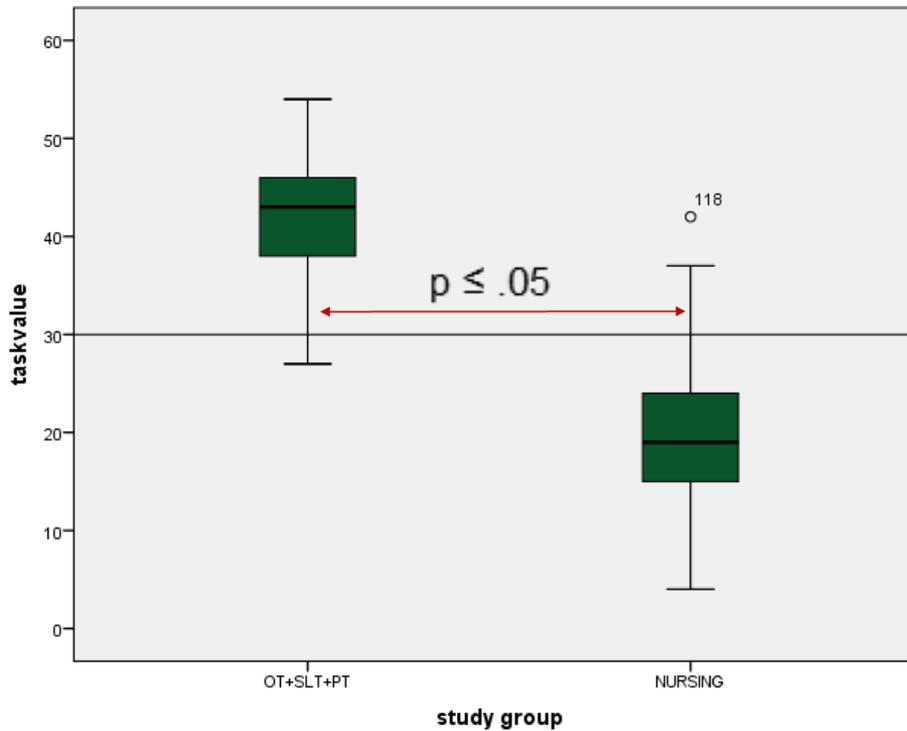
*OT (occupational therapy) SLT (speech language therapy) PT (physical therapy)

Results: levels



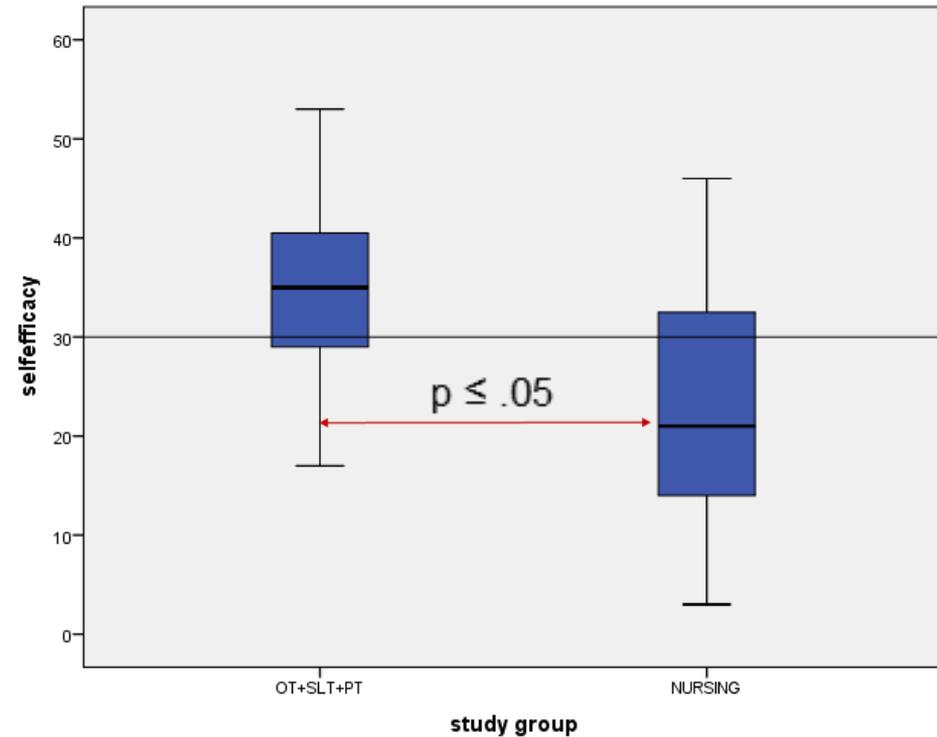
Results: comparison

Task Value



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

Self Efficacy



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

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Limits

- ▶ Fresno test and questionnaire motivational beliefs provide limited data (EBP step 4 and 5 are not measured).
- ▶ There is no standard for level of EBP skills
- ▶ Database is incomplete; involvement in education is prerequisite
- ▶ Study population not representative

Merits

year	Course	Evidence-based Practice Aims				
		1 Ask	2 Acquire	3 Appraise	4 Apply	5 Evaluate
1	Lectures Information Skills, Intro Research, Intro EBP	x	x			
2	EBP, Innovation project, Research project	x	x	x		
3	CAT-group, CAT-individual, case studies, Research Project	x	x	x	x	x
4	Research Project group, Research Project Individual, Interview	x	x	x	x	x

- More practice-based learning, towards shared decision making
- Overlap research skills/EBP skills

Knowledge



**Application
in practice**

Bottom Line

- Monitoring EBP competency with measuring instruments good way to start a discussion
- 'Real EBP' should be measured in another way