

Developing EBP competencies in nursing education

Hajar Senhaji, MSc, PSY

Erica Witkamp, PhD, RN

Karin Neijenhuis, PhD, SLT

Joan Verhoef, PhD, OT

Connie Dekker-van Doorn, PhD, RN, MScEd



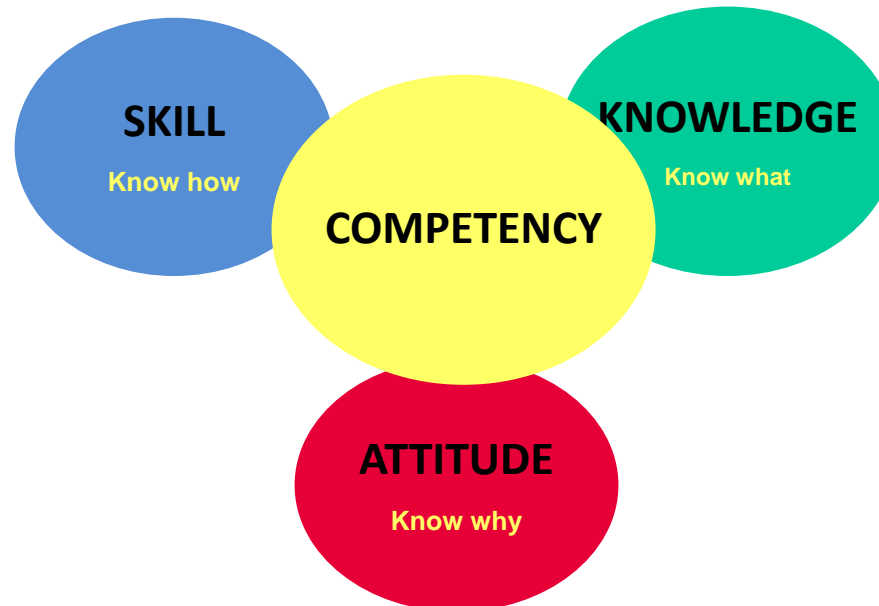
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- ▶ **To evaluate the current level of EBP competencies of second year nursing students**
- ▶ **To explore the relation between motivational beliefs and EBP skills and knowledge.**
- ▶ To evaluate differences in EBP competencies between different health care students



METHODS

- ▶ **Design:** Cross-sectional study
- ▶ **Participants:** 295 nursing students were registered in total.
- ▶ **Measurements:** The Dutch Modified FRESNO test (DMF) (Spek et al., 2012), and Questionnaire on motivational beliefs towards EBP (Spek et al., 2013)
- ▶ **Statistical analysis:** Spearman rho was calculated for associations. Differences between groups were tested with Mann Whitney U test



MEASURING EBP COMPETENCIES

Table 1. Questionnaire on EBP self-efficacy and task value

Task value

- It is important to use principles of EBP in my daily clinical routine
- It is important for students to have knowledge about recent scientific studies
- I find EBP stimulating

Self-efficacy

- I feel uncertain about EBP
- I often do not know where to find evidence on the Internet
- I believe my abilities to find scientific evidence are not adequate

DUTCH MODIFIED FRESNO

Question 12a)

A small confidence interval gives a more exact estimation of the relative risk reduction than a large confidence interval.

This is: correct / false

Question 10b)

Describe in your own words the meaning of the sensitivity of a test.

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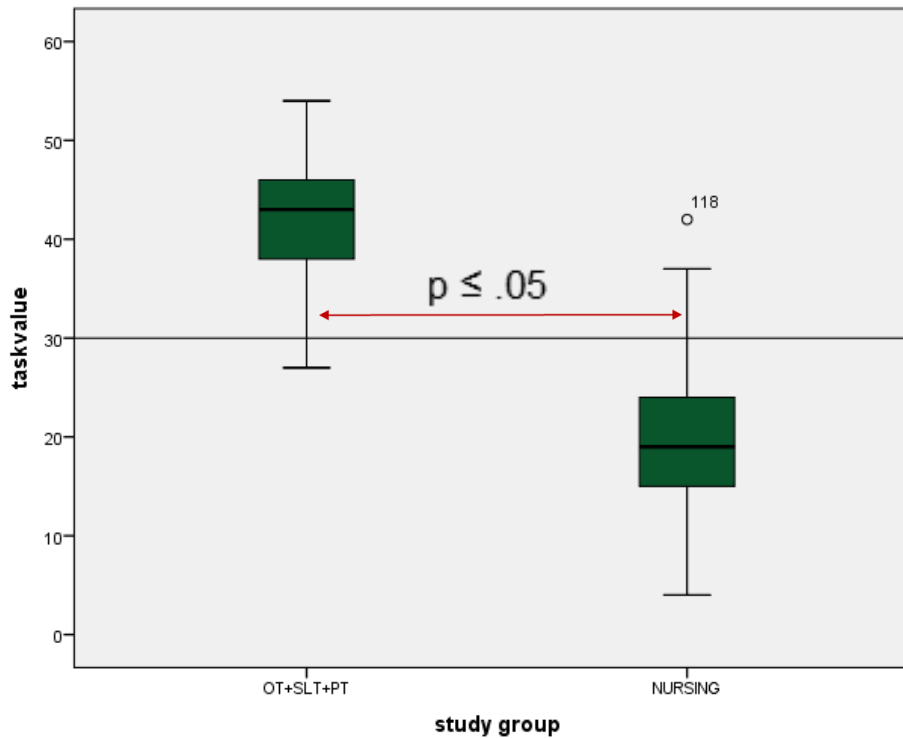
RESULTS –ATTITUDE

Study group	Profession	Year	N	Age Mean (SD)	Gender % female	Education % completed higher education	Motivation (max. 120) Mean (SD)	
							Task value	Self-efficacy
Student 2 nd year	OT+PT+ SLT	2013	62	21.9 (5,0)	74%	1,6%	42.2 (6.0)	34.6 (8.5)
	NURSING	2016	90	24.8 (7.4)	92%	12,2%	19.9 (7.2)**	22.9 (10.5)**

** p ≤ 0.001

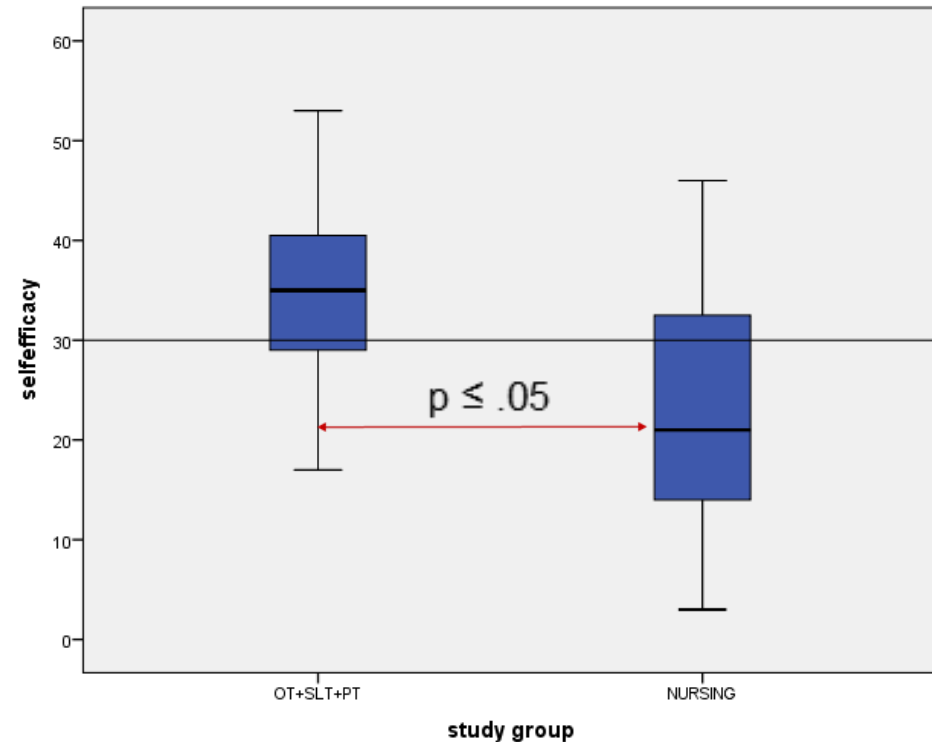
RESULTS – ATTITUDE

Task Value



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

Self Efficacy



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

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RESULTS – DMF

Study group	Prof.	Year	Pico (max. 24) Mean (SD)	Sources (max. 24) Mean (SD)	Searching (max. 24) Mean (SD)	Design (max. 12) Mean (SD)	Appraisal (max. 72) Mean (SD)	Statistics (max. 64) Mean (SD)	Total scores (max. 220) Mean (SD)
Student 2 nd year	OT+PT+ SLT	2013	12.1 (5.4)	11.7 (5.4)	14.0 (5.4)	4.6 (2.8)	16.6 (11.0)	9.9 (9.6)	68.5 (20.8)
	NURSING	2016	7.9 (3.0)**	13.5 (5.5)	16.0 (5.5)	3.0 (2.8)**	20.5 (10.7)*	10.2 (6.6.)	69.4 (14.3)

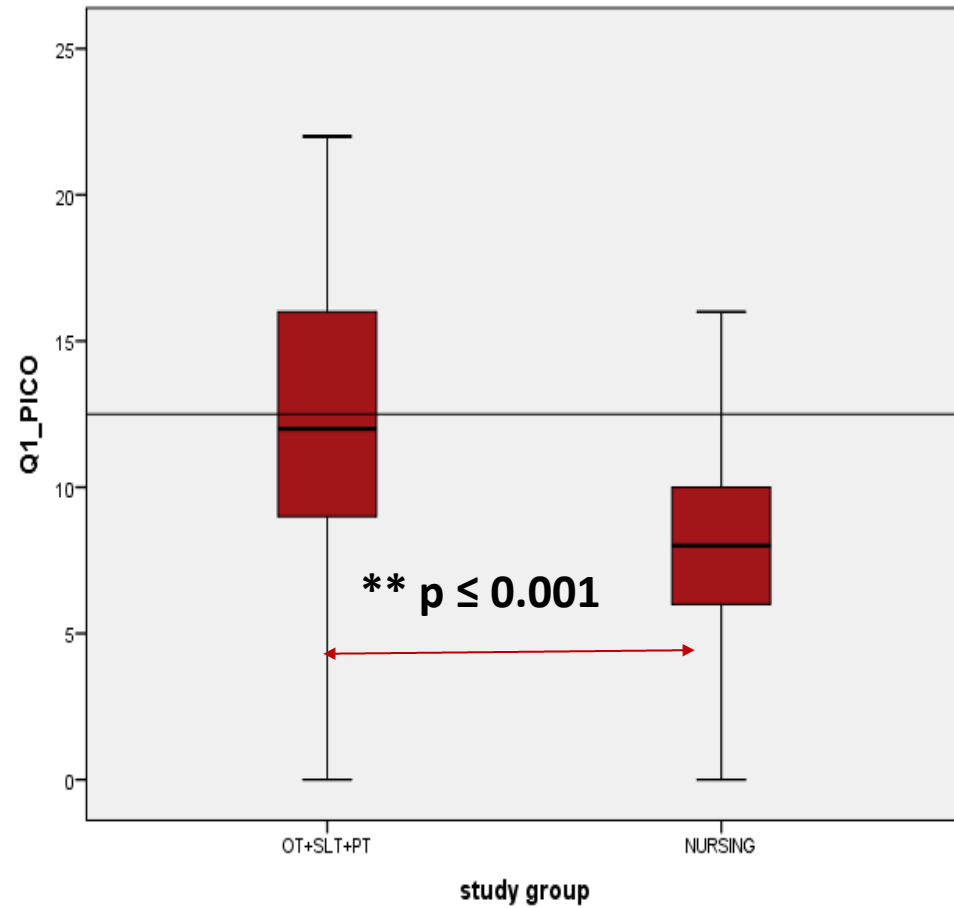
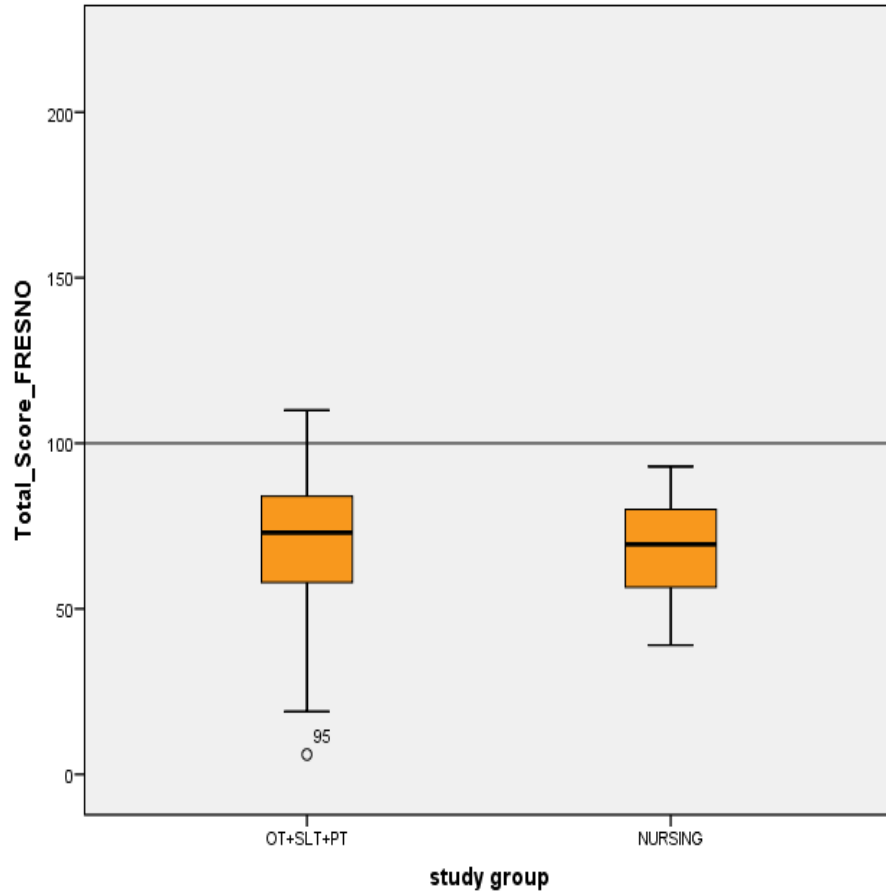
** $p \leq 0.001$

* $p \leq 0.05$

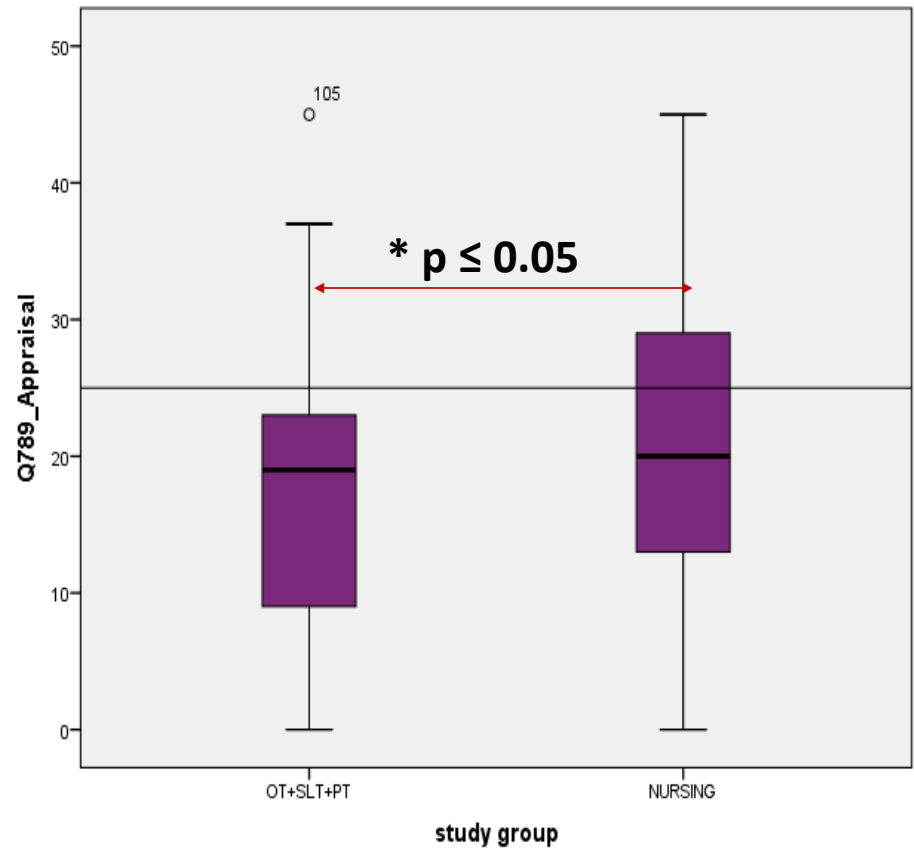
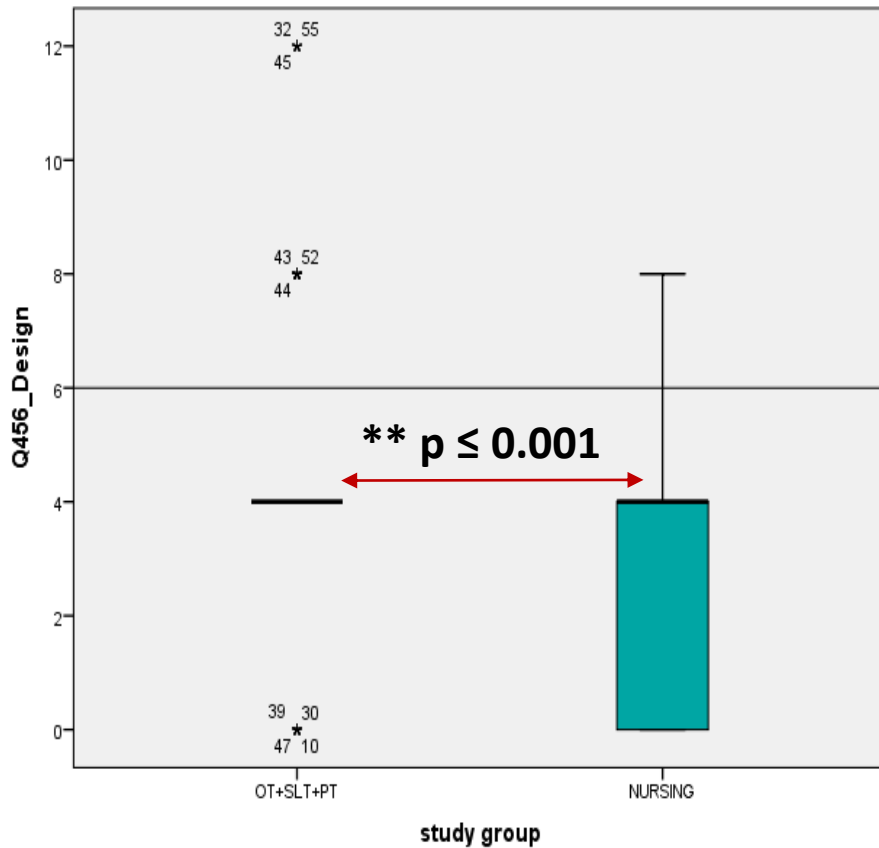
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RESULTS – DMF: TOTAL & PICO



RESULTS – DMF: Design & Appraisal



RESULTS – DMF & ATTITUDE

	TOTAL (N=152)	Other (N=62)	Nursing (N=90)
FRESNO total score	68.9 (18.6)	68.5 (20.8)	69.4 (14.3)
<i>Attitude Task value</i>	28.9 (12.9)	42.3 (6.0)	19.9 (7.3)
<i>Attitude Self-efficacy</i>	27.6 (11.3)	34.6 (8.5)**	22.9 (10.5)

Total: No association between DMF and attitude

Other: An association between DMF and SE ($r=-.415$)

Nursing: No association between DMF and attitude

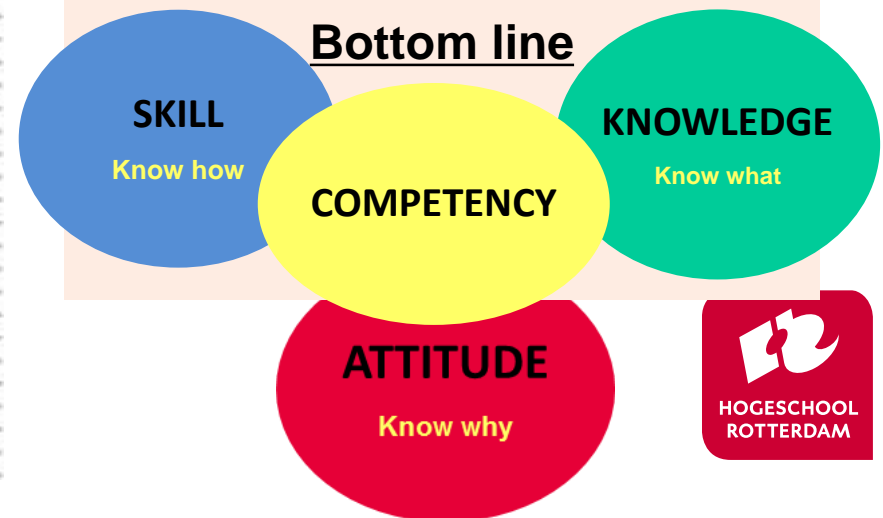
DISCUSSION

Nursing students

- ▶ Low task value & high self efficacy
- ▶ No association between attitude / skills / knowledge
- ▶ Insufficient EBP skills / knowledge
- ▶ Differences with other health care students

Limitations

- ▶ Selection bias
- ▶ Rating is time consuming & complicated
- ▶ Interpretation of DMF results is difficult
- ▶ Relevance for nursing?



Thank you for your attention

References

- ▶ **Spek B**, de Wolf GS, van Dijk N, Lucas C. (2012). Development and validation of an assessment instrument for teaching evidence-based practice to students in allied health care: the Dutch Modified Fresno. *J Allied Health*, 2012; 41(2):77-82.
- ▶ **Spek B**, Wieringa-de Waard M, Lucas C, van Dijk N. (2013). Competent in evidence-based practice (EBP): validation of a measurement tool that measures EBP self-efficacy and task value in speech-language therapy students. *Int J Lang Commun Disord*, 2013;48(4):453-7.
- ▶ **Ramos KD**, Schafer S, Tracz SM. (2003). Validation of the Fresno test of competence in evidence based medicine. *BMJ*, 2003; 326 (7384): 319-21.
- ▶ **McCluskey A.** & Bishop B. (2009). The Adapted Fresno Test of competence in evidence-based practice. *J Contin Educ Health Prof*, 2009; 29(2):119-26.
- ▶ **Dawes M**, Summerskill W, Glasziou P, Cartabellotta A, Martin J, Hopayian K, Porzsolt F, Burls A, Osborne J. (2005). Sicily statement on evidence-based practice. *BMC Med Educ*, 2005; 5 (1):1.

[Contact: h.senhaji@hr.nl](mailto:h.senhaji@hr.nl)

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