

# Assessment of allied and health sciences student competency in evidence-based practice

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# Background

- Assessment *for* learning, assessment *of* learning
- Tools include;
  - Berlin
  - Fresno
  - Assessing Competency in Evidence-based medicine (ACE)
- Limitation
  - All in medicine initially in medicine, some adapted

# Aims

- To adapt the ACE tool in the allied health and health sciences
- To incorporate a reflective component
- To psychometrically validate the Assessing Competency in Evidence-based practice + Reflection (ACER) tool

- All undergraduate students 1-4<sup>th</sup> years of allied health & health sciences invited to participate in online questionnaire
  - Physiotherapy
  - Occupational therapy
  - Radiation science
  - Radiation therapy
  - Radiography
  - Paramedicine
  - Biomedical science
  - Nutrition & dietetics

# The ACER tool

- Different scenario for each discipline
- ACER tool consists of 16 MCQs, with questions on;
  - Type of question
  - PICO
  - Search strategy
  - Critical appraisal
  - Interpretation of results
  - Applicability of the study + appraisal to the scenario (discipline)

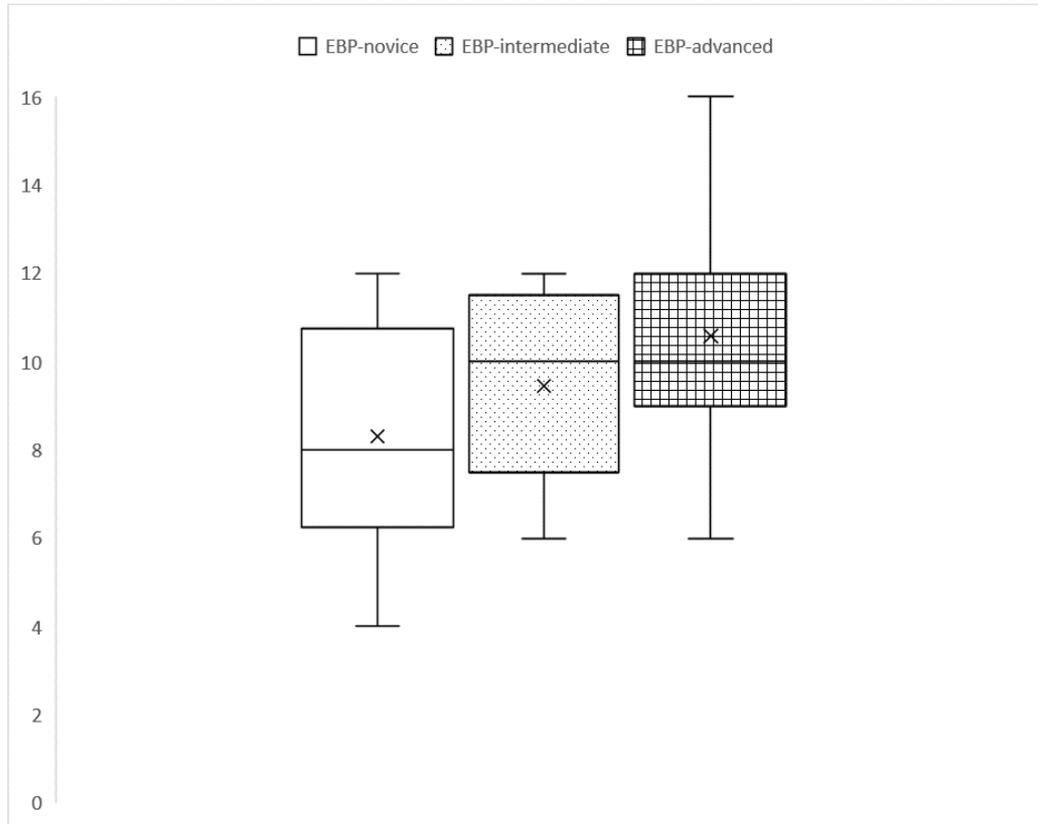
# Reflective component

- Self-efficacy rated as 0 (weak) to 100 (strong)
  - Asking an answerable question
  - Acquiring evidence
  - Appraising evidence
  - Applying evidence

# Results

- 2685 eligible student invited to participate
- 167 enrolled in the study
- 55 participants completing the questionnaire in total
- Cronbach's alpha – 0.44

# Results



# Results – item performance

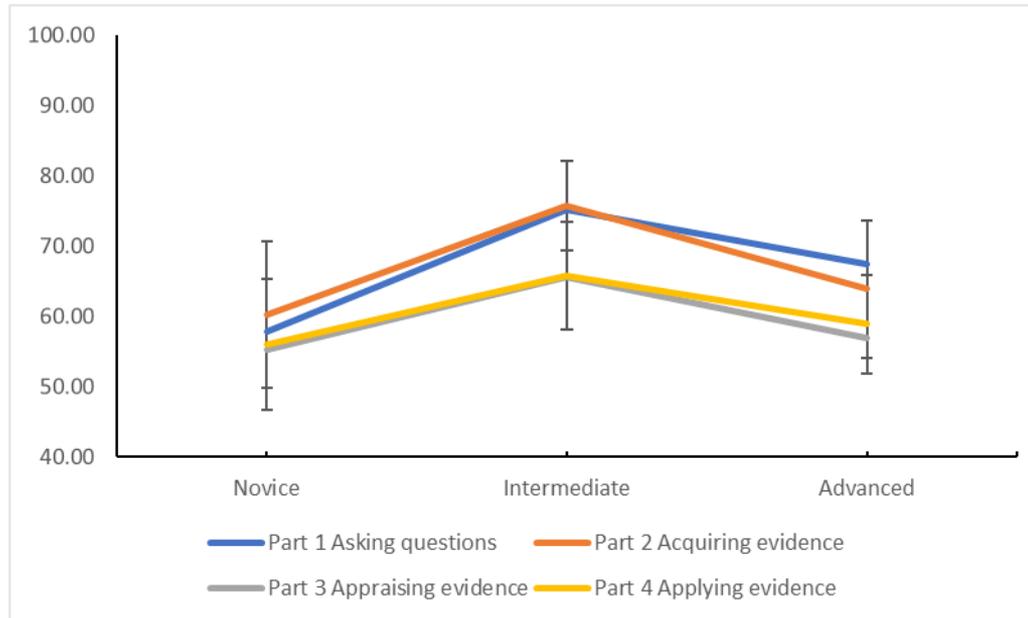
Item	IDI	ITC	Novice pass rate (%)	Intermediate pass rate (%)	Advanced pass rate (%)	Overall pass rate (%)
1	0.47	0.29	60	78	81	73
2	0.25	-0.05	60	67	62	62
3	0.41	0.27	30	44	50	42
4	0.36	0.15	55	67	81	69
5	0.20	-0.10	50	22	46	44
6	0.41	0.34	75	78	81	78
7	0.17	0.02	55	44	58	55
8	0.74	0.50	40	56	73	58
9	0.50	0.36	55	78	85	73
10	0.66	0.34	50	67	62	58
11	0.49	0.23	25	56	35	35
12	0.35	0.17	30	22	50	40
13	0.45	0.17	55	100	62	65
14	0.41	0.36	65	78	92	80
15	0.13	-0.08	75	56	69	69
16	0.11	-0.10	50	33	73	58

PICO

Baseline

SDM  
Other outcomes

# Results – reflective component



# Limitations...

- Sample size!!!
- Wording of the questions
- Timing

And a strength...

- Multidisciplinary

# Conclusion

- ACER tool has moderate validity and internal reliability as instrument in assessing EBP competency in the allied health and health sciences
- Quick to implement and assess
- Reflective component questionable



# Thank you

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