Validation of a Dutch translation of the Berlin Questionnaire on evidence-based medicine knowledge and skills

S.E. Zwolsman, M. Wieringa–de Waard, N. van Dijk

Department of General Practice
Academic Medical Center-University of Amsterdam
Background

Shaneyfelt et al *JAMA* 2006:

“Teaching of EBP should be evaluated and guided by evidence of its own effectiveness”

No instrument exists in the Netherlands
To validate a Dutch translation of the Berlin Questionnaire to be able to:

- Measure EBP knowledge and skills
- Evaluate EBP education in GP Specialty Training
Methods

- Instrument: Berlin Questionnaire
  Version A and B
  15 questions → applying EBP
  (Fritsche et al BMJ 2002)

- Translated

- Face validity
Methods

Validity

37 course participants and 7 tutors

Does the Dutch translation of the Berlin Questionnaire:

- Measure what we want it to?
- Differentiate between subgroups?
Methods

Reliability
140 GP trainees

- Are the items too easy/difficult?
- Do the items fit the whole test?
- Is the test too easy/difficult?
- Is the test internally consistent?
- What answers are often chosen?
- Are Version A and Version B interchangeable?
## Results

### Validity

*37 course participants and 7 tutors*

<table>
<thead>
<tr>
<th></th>
<th>Dutch versions</th>
<th>Original versions (Fritsche et al <em>BMJ</em> 2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsiveness</td>
<td>+ 1.54 points</td>
<td>+ 3.6 points</td>
</tr>
<tr>
<td>Known groups</td>
<td>Δ 4.01 points</td>
<td>Δ 5.60 points</td>
</tr>
</tbody>
</table>
# Results

## Reliability

<table>
<thead>
<tr>
<th></th>
<th>Dutch versions</th>
<th>Original versions (Fritsche et al <em>BMJ</em> 2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item difficulty</td>
<td>3 items/ version</td>
<td>√</td>
</tr>
<tr>
<td>Item correlation</td>
<td>3 items/ version</td>
<td>√</td>
</tr>
<tr>
<td>Score variation</td>
<td>within range</td>
<td>√</td>
</tr>
<tr>
<td>Alpha</td>
<td>0.46 for A; 0.50 for B</td>
<td>0.75 for A; 0.82 for B</td>
</tr>
<tr>
<td>Factor analysis</td>
<td>&gt; 1 construct</td>
<td>n/a</td>
</tr>
<tr>
<td>Version A versus B</td>
<td>5.94 vs 7.62</td>
<td>√</td>
</tr>
</tbody>
</table>
Limitations

- Low alpha
- Comparison with tutors
- Generalisability
The Dutch translation of the Berlin Questionnaire is a valid measure of EBM knowledge/skills