Development and acceptability of a vignette-matching procedure to assess clinical psychology trainees’ competencies in field placements

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Why develop a vignette-matching procedure?

- Strong evidence for leniency and halo biases
- Similar results across disciplines
- Inaccurate ratings produce adverse consequences
### Supervisor assessments: Reasons for leniency bias

<table>
<thead>
<tr>
<th>Reasons for leniency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Guilt/fear of damaging supervisee’s career</td>
<td>60 %</td>
</tr>
<tr>
<td>2) Difficulty providing negative feedback</td>
<td>50 %</td>
</tr>
<tr>
<td>3) Awareness of subjectivity inherent in evaluation</td>
<td>49 %</td>
</tr>
<tr>
<td>4) Fear of potentially diminished rapport</td>
<td>48 %</td>
</tr>
</tbody>
</table>

Robiner et al., 1987
Reasons for leniency

• Gonsalvez, Wahnon & Deane 2016
• Survey of 113 supervisors of postgraduate psychology trainees
• 58% believed their ratings were affected by leniency bias
• 66% believed their peers’ ratings were affected by leniency bias
  – Lack of objective measures (52%) or clear criteria (43%) for competence and incompetence
  – Guilt or fear about damaging a supervisee’s career or lengthening their education/internship (35%)
Measurement issues

• Typical Competency Evaluation Rating Forms use Likert-type or visual analogue scales
• Multiple items covering diverse domains
• Field supervisors consistently reluctant to assign average and below average grades
• Not remedied by
  – assigning wider scales (from 5 to 6-point)
  – or changing reference points from performance of other trainees to readiness to practice (Gonsalvez & Freestone, 2007)
Aim

• To design and evaluate a new vignette-based instrument to assess practitioner competencies in psychology
Practicum model in Australia

• Typically four placements
• First placement usually in University affiliated psychology training clinic
• Subsequent placements must have child/adolescent and adult psychiatric (SMI) experiences
• Evidence of leniency bias
  – At end of Placement 1, most students are rated as being in Stage 3 (out of 4) on most competency domains
  – Very few failed placements
Vignette Matching Procedure (VMAT)

- Catalogue of behaviourally descriptive vignettes
- Nine competency domains
  - Counselling
  - Clinical Assessment
  - Case Conceptualisation
  - Intervention (generic and CBT)
  - Ethical attitude and behaviour
  - Scientist-practitioner approach
  - Professionalism
  - Psychological Testing
  - Response to supervision
Vignette Matching Procedure (VMAT)

• Four to five vignettes per domain, 1 for each stage of development (stages 1 – 4)
• Each vignette carefully crafted and revised
• Panel of experts calibrated vignettes by assigning them to developmental stages
Calibrating vignettes

• Expert Panel (N=21 Clinic Directors)
• Reviewed sets of vignettes (each domain separately) and anchored them to a point along a continuum where the vignette best fitted

Clinical assessment skills
## VMAT Calibration Scores: Australian External Experts

<table>
<thead>
<tr>
<th>Domain</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideal</td>
<td>1.50</td>
<td>2.50</td>
<td>3.50</td>
<td>4.50</td>
</tr>
<tr>
<td>Counselling</td>
<td>1.58</td>
<td>2.32</td>
<td>3.52</td>
<td>4.57</td>
</tr>
<tr>
<td>Clinical Assessment</td>
<td>1.35</td>
<td>2.30</td>
<td>3.34</td>
<td>4.65</td>
</tr>
<tr>
<td>Case Conceptualisation</td>
<td>1.73</td>
<td>2.37</td>
<td>3.29</td>
<td>4.54</td>
</tr>
<tr>
<td>Intervention (Generic competencies)</td>
<td>1.60</td>
<td>2.56</td>
<td>3.65</td>
<td>4.31</td>
</tr>
<tr>
<td>Intervention (CBT)</td>
<td>1.58</td>
<td><strong>2.79</strong></td>
<td>3.55</td>
<td>4.46</td>
</tr>
</tbody>
</table>

N = 21; Scores in excess of +/- 0.25 are highlighted
## VMAT Calibration Scores: Australian External Experts and Site Coordinators

<table>
<thead>
<tr>
<th>Domain</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>Stage 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideal</td>
<td>1.50</td>
<td>2.50</td>
<td>3.50</td>
<td>4.50</td>
<td>5.50</td>
</tr>
<tr>
<td>Psychological Testing</td>
<td>1.41</td>
<td>2.41</td>
<td>3.56</td>
<td>4.61</td>
<td>NA</td>
</tr>
<tr>
<td>Scientist /Practitioner Competencies</td>
<td><strong>1.87</strong></td>
<td><strong>2.92</strong></td>
<td>3.28</td>
<td>4.65</td>
<td>NA</td>
</tr>
<tr>
<td>Ethical Attitude and Behaviour</td>
<td>1.75</td>
<td>2.10</td>
<td>3.00</td>
<td>4.33</td>
<td>NA</td>
</tr>
<tr>
<td>Professionalism</td>
<td>1.35</td>
<td>2.39</td>
<td>3.71</td>
<td>4.64</td>
<td>NA</td>
</tr>
<tr>
<td>Response to Supervision</td>
<td><strong>1.83</strong></td>
<td>2.55</td>
<td>3.45</td>
<td>4.38</td>
<td>5.45</td>
</tr>
</tbody>
</table>

N = 21
Case conceptualisation: Vignette 1

• Trainee CF assesses and formulates only a small number of simple and distinct interventions with supervision. She/he demonstrates difficulty recognising the individual context and client circumstances that require integration into a formulated intervention. She/he is not able to modify an intervention when new information comes to light. She/he requires the supervisor to help translate formulations into a language the client will understand and to communicate these to the client.

• Calibration SCORE: 1.73, SD: 0.38
Case Conceptualisation: Vignette 4

• Trainee CI independently assesses and formulates appropriate interventions which draw from a broad base of standardised models. She/he integrates formulated interventions within the client’s individual context and circumstances in both simple and complex cases and modifies these as new information comes to light. She/he translates complex formulations into language the client will understand and accept.

• Calibration SCORE: 4.54, SD: 0.27,
Supervisor ratings

• Presented online, randomly start with highest or lowers vignette
• “Please indicate whether your trainee attained a developmental stage that is higher, equal to, or lower than that depicted in each vignette”
• Radio buttons
  – Higher than
  – Equal to
  – Lower than
Clinical Psychology Competencies Rating Scale (CΨPRS)

- 69 items
- Eight competency domains
- Rate of progress and Response to Supervision during Placement
- 0 (Stage 1 Beginner) to 10 (Stage 4 Competent) visual analogue scale
- Descriptions for Stage 1, 2, 3 and 4 provided as reference point.
Stage 1 Beginner

- Knowledge and skills are at an early stage of yet to be developed.
- Inadequate knowledge and/or difficulty applying knowledge to practice.
- Several problems or inadequacies occur during sessions.
- Little awareness of process issues.
- On par with trainees commencing training without any practicum experience.
- Regular and intensive supervision required.
Stage 4 Competent

• Large repertoire of basic and advance competences in both assessment and intervention, applied across a range of clients and severity levels.

• On par with a clinical psychologist working in their first job upon qualification.
### Percentage trainees assigned to stage four developmental stage (n = 57)
Gonsalvez et al., 2013 in *Training and Education in Professional Psychology*

<table>
<thead>
<tr>
<th>Competency domains</th>
<th>CYPRS Stage 4</th>
<th>Vignette Matching Procedure Stage 4</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relational skills</td>
<td>70%</td>
<td>44%</td>
<td>26%</td>
</tr>
<tr>
<td>Clinical assessment</td>
<td>67%</td>
<td>56%</td>
<td>11%</td>
</tr>
<tr>
<td>Case formulation</td>
<td>63%</td>
<td>34%</td>
<td>29%</td>
</tr>
<tr>
<td>Intervention skills</td>
<td>69%</td>
<td>49%</td>
<td>35%</td>
</tr>
<tr>
<td>Psychometrics</td>
<td>69%</td>
<td>10%</td>
<td>59%</td>
</tr>
<tr>
<td>Scientist-practitioner</td>
<td>80%</td>
<td>36%</td>
<td>25%</td>
</tr>
<tr>
<td>Ethical practice</td>
<td>80%</td>
<td>69%</td>
<td>11%</td>
</tr>
<tr>
<td>Professional skills</td>
<td>83%</td>
<td>53%</td>
<td>30%</td>
</tr>
<tr>
<td>Progress during placement</td>
<td>85%</td>
<td>57%</td>
<td>28%</td>
</tr>
<tr>
<td><strong>Grand mean</strong></td>
<td><strong>74%</strong></td>
<td><strong>45%</strong></td>
<td><strong>29%</strong></td>
</tr>
</tbody>
</table>
Differentiating Novice (n = 30) from Advanced students (n = 16)
Supervisors evaluations of VMAT compared to CYPRS

- More Valid
- Harder to Use
- Better Captures Trainee Performance
- More Time Consuming

Strongly Disagree  | Disagree  | Neutral  | Agree  | Strongly Agree
--- | --- | --- | --- | ---
Supervisors’ evaluations

• N = 96 supervisors
• % “Agree” or “Strongly agree”
• 88% VMAT more accurate & valid than CYPRS
• 83% VMAT more reliable than CYPRS
• 47% CYPRS easier to distinguish between stages
Conclusions

• 65% of trainees had completed only one placement (200-300 hours) and would be considered novices by training institutions but mean competency ratings were above 8/10.

• Vignette approach seemed to yield data suggestive of reduced leniency and halo biases

• Vignettes did not better differentiate novice and advanced beginners

• Supervisors evaluated vignette approach positively
Study 2 Revised CYPRS and VMAT

• CYPRS revised visual analogue
  – Prior: Beginner 0____________10 Competent
  – New:
    Stage 1    Stage 2    Stage 3    Stage 4
    Beginner |-----|-----|-----|-----|-----|-----| Competent
  – Brief stage descriptors

• VMAT
  – Still higher, equal or lower judgements
  – When between stages
  – Stage descriptions presented and
  – Visual analogue slider to refine judgements
Revised Vignette Matching Procedure (VMAT)

**Stage X -** Trainee GJ does not prioritise and effectively discharge casework, work, and personal responsibilities. Consequently she/he requires close supervision to monitor and ensure adequate client and agency outcomes. Because of a limited competency set or unreliable self-evaluations, Trainee GJ requires direction to ensure appropriate client care and professional development. Problematic communication styles and/or hypersensitivity to comments and feedback may lead to interpersonal conflict. Dress, presentation, and demeanour may also fall short of professional standards.

**Stage Y -** Trainee GK experiences some difficulties in managing the professional demands of the placement. This has included managing time and priorities in order to ensure that important tasks are completed in a timely manner. Her/his manner with team members is generally appropriate, except when under stress or during interactions with those in authority when appropriate confidence is lacking. She/he responds to feedback relating to many of these issues, but is inconsistent in identifying them for her/himself.

Please estimate, as best you can, the level your trainee has attained by clicking/moving the slider to the relevant point between the two stages.
Percentage trainees assigned to stage four developmental stage (n = 91)

<table>
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<tr>
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<th>CYPRES</th>
<th>Vignette Matching Procedure</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Stage 4</td>
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</tr>
<tr>
<td>Counselling skills</td>
<td>59%</td>
<td>57%</td>
</tr>
<tr>
<td>Clinical assessment</td>
<td>48%</td>
<td>49%</td>
</tr>
<tr>
<td>Case formulation</td>
<td>45%</td>
<td>38%</td>
</tr>
<tr>
<td>Intervention skills</td>
<td>40%</td>
<td>44%</td>
</tr>
<tr>
<td>Ethical attitude and behaviour</td>
<td>71%</td>
<td>75%</td>
</tr>
<tr>
<td>Scientist-practitioner approach</td>
<td>57%</td>
<td>33%</td>
</tr>
<tr>
<td>Professionalism</td>
<td>75%</td>
<td>65%</td>
</tr>
<tr>
<td>Psychometric testing</td>
<td>33%</td>
<td>31%</td>
</tr>
<tr>
<td>Grand mean</td>
<td>55%</td>
<td>51%</td>
</tr>
</tbody>
</table>
### VMAT changes in percentages in stage four developmental competency domains

<table>
<thead>
<tr>
<th>Competency domains</th>
<th>VMAT N = 57 2013</th>
<th>VMAT N = 91 2016</th>
<th>Difference</th>
</tr>
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<tbody>
<tr>
<td></td>
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<td></td>
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<tr>
<td>Clinical assessment</td>
<td>56%</td>
<td>49%</td>
<td>-7%</td>
</tr>
<tr>
<td>Case formulation</td>
<td>34%</td>
<td>38%</td>
<td>4%</td>
</tr>
<tr>
<td>Intervention skills</td>
<td>49%</td>
<td>44%</td>
<td>-5</td>
</tr>
<tr>
<td>Psychometrics</td>
<td>10%</td>
<td>31%</td>
<td>21%</td>
</tr>
<tr>
<td>Scientist-practitioner</td>
<td>36%</td>
<td>33%</td>
<td>-3%</td>
</tr>
<tr>
<td>Ethical practice</td>
<td>69%</td>
<td>75%</td>
<td>6%</td>
</tr>
<tr>
<td>Professional skills</td>
<td>53%</td>
<td>65%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Grand mean</strong></td>
<td><strong>44%</strong></td>
<td><strong>49%</strong></td>
<td><strong>5%</strong></td>
</tr>
</tbody>
</table>
Why are CYPRS ratings lower?

• In 2013 study 54% were “Novice” on first placement ratings.
• In 2016 only 38% of sample are “Novice” or first placement ratings
• Clearer Stage anchors and descriptors
Conclusion

Contributions include

• Design of new instrument – Vignette Matching Assessment tool (VMAT)
• Comprehensive catalogue of vignettes designed and calibrated
• Currently being trialled by multiple sites
• Wealth of data from conventional scale
• Good preliminary results favouring the new instrument
• Has cross-disciplinary applications
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