

How to Evaluate the Role-play of Simulated Patients: Development and Validation of a New Questionnaire.

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Introduction

- The reliability and also the validity of an OSCE depend on the examiner rating, the standardization of the stations and on the highly standardized role-play of the simulated patient.
- Yet only few studies address the quality assessment that is crucial for the outcome (1).

1 Cleland JA et al. AMEE Guide No 42. Med Teach 2009

Introduction

Authenticity during the consultation

- 1 SP appears authentic
- 2 SP might be a real patient
- 3 SP is clearly role-playing
- 4 SP appears to withhold information unnecessarily
- 5 SP stays in his/her role all the time
- 6 SP is challenging/testing the student
- 7 SP simulates physical complaints unrealistically
- 8 SP's appearance fits the role
- 9 SP answers questions in a natural manner
- 10 SP starts conversation with the student(s) during time-out

➤ Mainly realism, little communication, not enough items at all, teaching situation

➤ Questionnaire for individual and specific quality management

2 Wind La et al. MEDICAL EDUCATION 2004

Hypothesis / Research Questions

H: The role-play of simulated patients can be assessed in a valid and reproducible way by a questionnaire.

- What are the criteria for an authentic role-play of simulated patients in an OSCE?
- How is it possible to operationalize these criteria in a short questionnaire to be able to assess the role-play of simulated patients?
- Is the developed questionnaire valid and reliable and the rating reproducible?

Methods: 1 Collection, Prioritization

➤ We asked three experts, teachers, simulated patients and students what are the criteria for good role-play.

➤ We collected criteria.

➤ Three other experts, teachers, simulated patients and students prioritized them.

● **April 2010**

- Quali
tative
Survey
- Priori-
tization

Methods: 2 Operationalization

April 2010

- Qualitative Survey
- Prioritization

October 2010

- Operationalization

Communication

- 5 Items

Information

- 4 Items

Realism

- 7 Items

Recurrent Play

- 1 Item

Global Rating

- 1 additional Item

Methods: 3 Pretest A

18 Raters, 90 questionnaires

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5 Roles	University	Subject
History Taking	Göttingen	General Medicine
Patient Management	Frankfurt	Internal Medicine
Physical Examination	Frankfurt	Surgery
Breaking Bad News	Mainz	Med. Psych., Sociology
Psychiatric Exploration	Dresden	Psychiatry

Methods: 3 Results Pretest A

➤ Improvement

One item was removed because of a low item difficulty $p < .70$ and a discriminatory power under $r = .30$

● **April 2010**

- Qualitative Survey
- Prioritization

● **October 2010**

- Operationalization

● **February 2011**

- Training before Pretest A
- Pretest A
- Revision

Cronbach's alpha:

➤ commun. $\alpha=0.798$

➤ information $\alpha=0.583$

➤ realism $\alpha=0.894$

➤ entire questionnaire was highly reliable with $\alpha=0.894$

Methods: 4 Results Pretest B

April 2010

- Qualitative Survey
- Prioritization

October 2010

- Operationalization

February 2011

- Training before Pretest A
- Pretest A
- Revision

March 2011

- Training before Pretest B
- Pretest B

intern
consistency:

➤ comm.

$\alpha=0.775$

➤ informat.

$\alpha=0.819$

➤ realism

$\alpha=0.836$

➤ entire questionnaire stayed highly reliable with $\alpha=0.892$

The Final Questionnaire

Communication

- 5 Items

Information

- **4 Items**

Realism

- 7 Items

Recurrent Play

- 1 Item

Global Rating

- 1 additional Item

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Methods: 5 OSCE

➤ From 89 questionnaires¹:

- 34 questionnaires for history taking
- 47 questionnaires for **phys. examination**
- 8 questionnaires for **patient management**

➤ in parallel use with the already validated MaSP questionnaire (2)

➤ All examiners were trained for the MaSP questionnaire, our questionnaire and the OSCE rating before.

² Wind La et al. MEDICAL EDUCATION 2004;

¹Internal Medicine OSCEs, Frankfurt

April/May 2011

- Training before OSCE
- Use in the real OSCE

Results

	Subscale Communication	Subscale Information	Subscale Realism	New Questionnaire	MaSP
Mean (SD)	4.34 (1.10)	4.0 (1.50)	4.19 (0.83)	4.17 (0.88)	3.25 (0.52)
Cronbach's α	0.766	0.852	0.686	0.863	<u>0.630</u>
Spearman Rho Correlationcoefficient	0.285	0.229	0.431	0.386	-
Significance-level	0.05	0.05	0.01	0.01	-

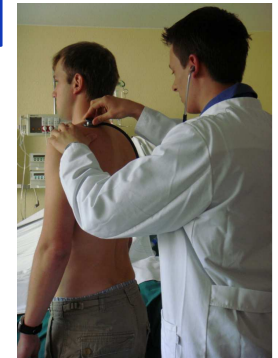
➤ Subscale realism had the highest agreement to the MaSP.

Discussion / Take Home Message

- Our new questionnaire showed very good statistical results, in comparison to the MaSP even better.



- The questionnaire provides a widespread performance evaluation in “high stakes” assessment.



- The appropriateness of our questionnaire for different types of role-play may be an idea for further research.

Special thanks to Sabine Fischbeck, Martin Fischer, Anne Simmenroth-Nayda, Reinhard Strametz, Dagmar Kujumdshiev, Benjamin Weih, Patricia Winkelmann, Uwe Zinßer and Michaela Zupanic.

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