Redesigning a Mental Status Examination as an Objective Assessment Tool in a Virtual Standardized Patient with Schizophrenia

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Disclosure

The authors of this presentation are current employees of an educational software company that develops virtual patient simulations for nursing education and allied health programs.

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Overview of Presentation

- Virtual Patient Simulations
  - DCE Mental Health Simulations
- Focused Exam: Schizophrenia
  - Overview of Patient Case
  - Learning Objectives
  - Mental Status Exam
- Purpose of Study
- Redesigning the Mental Status Exam
- Student Evaluation Results
- Conclusions and Implications for Practice
Virtual Patient Simulations

- Asynchronous, computer-based clinical simulations in which students can interview and examine virtual patients.
Virtual Patient Simulations

- Can be used effectively to improve communication skills as it relates to recognizing significant patient data (Foronda et al., 2014).

- With novice learners, virtual simulations can introduce the process of perceiving characteristics and aspects of patient care situations that may determine the way nursing care is delivered (Bambini et al., 2009).
In each patient case simulation, students:

- Complete a pre-brief
- Interview – collect subjective data
- Examine – collect objective data
- Document their findings
- Educate and empathize
- Perform SBAR handoff
Focused Exam: Schizophrenia

Scenario details
- Mr. Eric Ford is a 28-year-old Black man who was brought to the ER at 2am after experiencing acute auditory command hallucinations.

Diagnosis
- Schizophrenia; chronic, paranoid, with acute exacerbation.

Chief complaint
- "I hear voices… They were under control for a while, but they got louder and louder so my mom brought me here to get some help, that’s all I really want."

Main learning objectives of the simulation
- Apply principles of safety to patient-centered mental health care.
- Practice interprofessional communication.
- Perform a problem-focused physical assessment.
- Conduct a mental status examination
- Demonstrate empathic, nonjudgmental, caring communication with patient.
Mental Status Examination v.1

- MSE v.1 contained 12 open note-taking fields.
- Not objective, not easily gradable.
- Time consuming for both faculty and students.
Purpose of the Study

The purpose of this study was to redesign an open note-taking MSE into a more objectively-based assessment for a virtual standardized patient with schizophrenia.
Redesigning the MSE

The redesign process involved a team of nursing educators, narrative designers, programmers, and testing experts working together towards converting 12 MSE open-ended fields into objective dimensions.

Main steps
- Researched objective findings for MSE (i.e., normals and abnormals).
- Matched objective findings to the specific patient presentation.
- Validated matched correct findings for each dimension.
Mental Status Exam v.2

- Added objective choices to each component of the MSE.
- Grades students on their answers for each MSE element.
- Still allows students to use the open notes fields in EHR.
- Changes the overall score to incorporate the MSE (14 more points).
Overall score that combines their performance on subjective data collection, objective data collection, and education and empathy.

Feedback on time spent with the patient as well as time spent on SBAR.

Detailed feedback on each of the components of the MSE.

Unscored feedback on the QSEN competencies demonstrated during the patient interaction.
Evaluation of MSE v.2

To evaluate the appropriateness and accuracy of the new MSE:

- 29 undergraduate nursing students completed Eric Ford’s simulation online.
- After completing the patient, students responded to a 9-item online survey.
Q1 Overall, how satisfied are you with your experience using the automatic feedback mental status exam (MSE)?
Q4 Below is a list with the components of the automatic feedback MSE exam. Using the provided categories, please rate how easy or difficult to appreciate or answer each component was. Please rate each component according to what really reflects your experience conducting the MSE on Eric Ford rather than what you think your experience should be. Please treat each component separately from every other component.

![Bar chart showing ratings for different components of the MSE exam](chart.png)
**Question:** How did you feel about having only two choices for each MSE component? For example, Thought Content: a) No presence of disturbances; and b) Presence of delusions, obsessive or intrusive thoughts.

- Students felt that having two choices made it easier and more obvious
  - “I had no problems with it. The patient either has or does not have”
  - “I thought that it made the objective of the test more clear. The test is either present or not.”
  - “This was good. Kept it very "black or white", no room for gray perceptions”
Q7 Would you like to have had an opportunity to provide open notes along with your answer?

Q8 How did you feel about your score on the mental status exam?
**Question:** Reflecting back on your experience with the automatic feedback MSE, what additional feedback do you have for our team?

**Overall, students thought that:**
- It was a more efficient way of collecting data.
- The exam and patient interaction were realistic.
- Performance feedback would help them adjust future patient assessments.
Conclusions and Implications for Practice

- Exposing students to common patient assessment tools like the MSE is critical as students need to practice collecting and organizing objective data that relates to a patient’s cognitive process (Halter, 2014).

- Having an objective-based version of the MSE in the virtual simulation makes the patient assessment more direct, efficient, and effective.
Conclusions and Implications for Practice

- Virtual patient simulations can provide
  - Students with opportunities to gain experience with mental health assessments.
  - Scenarios in a safe and controlled manner before beginning actual patient care experiences with mentally ill patients.
Thank you!

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