A PILOT STUDY TO EVALUATE THE USE OF AN INTERACTIVE VIRTUAL PATIENT WITH DEPRESSION TO TEACH HISTORY-TAKING SKILLS IN A PSYCHIATRY CLERKSHIP

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EDUCATIONAL OBJECTIVE

Recognize possible uses of virtual patient technology in medical student education in psychiatry.

BACKGROUND

• Computer simulation is becoming part of teaching and assessment in the health professions.
• Currently, most students are taught and evaluated on how to conduct a medical interview through the use of standardized patients.
• Virtual patient (VP) systems are computer programs that simulate real-life clinical scenarios in which the learner can complete a patient interview and physical exam, while making diagnostic and therapeutic decisions.
• These systems can offer numerous advantages over traditional methods including:
  ◦ Standardized Instruction
  ◦ Immediate and Objective Performance Feedback
  ◦ Unlimited Opportunity for Repetitive Practice
• However, there are only few published applications of a psychiatric VP scenario in medical student education.1,2
• We present preliminary data on the creation and evaluation of a web-based VP scenario that assesses students’ ability to elicit symptoms of major depression.


VIRTUAL PEOPLE FACTORY (VPF)

VPF is a web-based VP system (created using Apache Web Server, PHP Scripting Language, and MySQL Database) that:

• teaches history-taking skills through the use of an instant messaging program;
• utilizes user responses for rapid and adaptive script development

Feedback generated includes an Interview Transcript, a Topic Flow Outline, and a Topic Item Checklist ("discoveries").

METHODS

• The VP is Ms. Young, a 21-year old college student, with a chief complaint of insomnia and fatigue.
• 67 third-year medical students participated in the on-line interaction.
• During their clerkship orientation, they were given a lecture on interviewing a patient with depression.
• Following the didactic presentation, students were introduced to VPF, then interviewed the patient, received immediate online feedback, and completed a follow-up survey.

RESULTS

Survey Results
Percentage of students

- Did you enjoy this interaction?
  - Excellent, 1%
  - Good, 24%
  - Fair, 12%
  - Poor, 16%
- How valuable is this as an education tool?
  - Excellent, 1%
  - Good, 22%
  - Fair, 18%
  - Poor, 9%
- How do you rate the overall interaction?
  - Excellent, 1%
  - Good, 22%
  - Fair, 18%
  - Poor, 9%

Topic Flow Checklist (Discoveries) Analysis
Percentage of students who elicited each symptom of major depression

- S1: Sleep and Appetite
  - 80%
- I: Increased Interest and Pleasure
  - 80%
- G: Worthlessness, Guilt
  - 75%
- E: Fatigue or Loss of Energy
  - 83%
- C: Decreased Concentration
  - 78%
- A: Affect = Depressed Mood
  - 97%
- P: Psychomotor Retardation
  - 40%
- S2: Suicide Thoughts
  - 72%

Nine symptoms of depression as listed in DSM-IV were marked as 8 “Discoveries”
As students interviewed the patient, each symptom discussed was marked off the checklist
97% of students discovered patient’s depressed mood, but only 40% of students discovered patient’s psychomotor retardation.

CONCLUSIONS

Students suggested that this tool can be useful in the first two years of medical school to decrease anxiety and offer practice before interviewing patients.

Common critiques addressed the lack of response or inappropriate response of the VP to some questions, mostly to empathetic statements, however, because the VP scenario tested by the student is a “work in progress”, its responses can be improved as the scenario continues to be used.

With further refinement, VP psychiatric scenarios can become useful in teaching clinical interactions in the pre-clinical years of medical training.

In an online format, they can be used by the student in their own time to complement lecture or small group learning.

To interact with the patient, visit: http://verg.cise.ufl.edu/VirtualPeopleFactory/publicScript.php?script_id=75
Email Correspondence to hevshah@students.mcg.edu