

Virtual Standardized Patient scenarios utilizing Artificial Intelligence are well accepted by SMU health Professional Students as a learning tool.

Background:

For decades, universities and other healthcare education environments have increasingly chosen simulated clinical scenarios to teach their students. However, the possibility of remote learning was never as essential as it has become since the COVID pandemic.

The isolation and incentive to remote ways of communication created challenges and unprecedented opportunities to incorporate novel forms of simulation-based education, including using Virtual Standardized Patient scenarios utilizing AI (VSP-AI).

Methods:

Between 2019 and 2021, 136 health professional students at Samuel Merritt University (SMU) were exposed to virtual standardized patient (VSP) scenarios.

The chief complaints were either “headache” or “fatigue”.

Students included 24 Family Nurse Practitioners (FNP), 48 Physician Assistants (PA) and 64 Bachelors of Science in Nursing (BSN) learners. Students conducted 5-15 minute scenarios independently as required by their course faculty. All students submitted to the simulation received an SMU IRB-approved questionnaire. The response to the questionnaire was voluntary by the students.

Results:

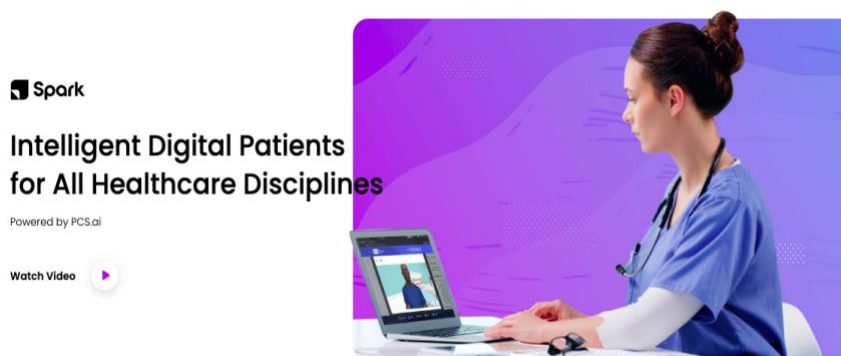
Response rates varied from 58% for PA, 67% for BSN, and 92% for FNP students.

Most students believed that AI helped improve history-taking skills and develop differential diagnoses (77% NP, 57% PA, and 85% BSN). Student perception of the realism of scenarios was also varied (64% FNP, 46% PA, and 56% BSN). However, almost all student groups wanted more exposure to new VSP scenarios in the future (90% FNP, 89% PA, and 93% BSN).

Discussion:

Due to the COVID-19 crisis, many students and health professional programs lost access to Standardized Patient (SP) forms of simulation. While provider-patient interaction in case-based learning will always be the center of health professional education³, the practice of medicine and medical education have rapidly incorporated novel technologies¹.

In our study, we face a variable response rate across health professional students, which is expected in a survey that evaluates opinions and insights. We also had a fidelity limitation regarding the lack of realistic interaction with the Artificial intelligence patient. Despite that, in this study, the vast majority of student responders are willing to have new experiences with additional scenarios/encounters. These results demonstrate excellent potential for implementing AI in health professional education, as it may help interpersonal skills and prepare students for future interviews with actual patients. Soon virtual patients will become a fundamental part of our life and a complementary learning environment². Today's health professional students find AI highly acceptable for their learning. Health professional schools may benefit significantly by becoming early adopters of this form of simulation-based education and evaluation method.



Video 1. Why PCS Spark?

Link: <https://www.pcs.ai/spark/>

References

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