[P01.006] Teaching Cranial Nerve Examination Using a Virtual Patient and the Nintendo Wiimote®: Preliminary Evaluation

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OBJECTIVE: This pilot study tested the face validity of an innovative tool called NERVE (the neurological examination rehearsal virtual environment), created at the University of Florida. **BACKGROUND:** Teaching students how to recognize rare neurological deficits during a cranial nerve examination is challenging. NERVE simulates a life-size virtual patient that can be examined using speech recognition and a Nintendo Wiimote®. The Wiimote® serves as a virtual hand, ophthalmoscope, and eyechart. **DESIGN/METHODS:** Following IRB approval and informed consent, 7 clinicians, 7 residents, and 8 medical students from the Medical College of Georgia performed a cranial nerve examination on a VP with a nerve III impairment. Additionally, the 8 medical students used a web-based simulator, the UC-Davis Eye Simulator 2.0™, for comparison purposes. A pre-experience survey assessed demographics, neurology experience, and video-game experience. A post-experience survey assessed the fidelity of the VP, the educational value of NERVE, and the usability of the Wiimote®. The medical student group also provided an overall rating of both NERVE and the UC-Davis Eye Simulator™. **RESULTS:** Using the medical student data, a paired samples t-test was conducted between NERVE and UC-Davis Simulator ratings, finding no significant differences. Eight of 8 students, 3 of 7 residents, and 5 of 6 clinicians correctly identified the CNIII deficit. For overall NERVE interview experience, using a scale of 1 (worst) to 10 (best), students, residents, and clinicians gave average ratings (standard deviations) of 6.63 (1.598), 5.71 (1.604), 5.00 (2.366), respectively. **CONCLUSIONS/RELEVANCE:** Less than half of residents correctly identified the CN defect, perhaps due to their limited experience with the technology platform. Despite a small sample size, trends show that clinicians were more critical of NERVE, though overall opinion tended towards agreement that NERVE had educational value. This study leaves us with much to explore, as NERVE shows strong face-validity towards teaching students to recognize abnormal neurological conditions.