



A Virtual Reality Simulation Teaching Paediatric Cardiopulmonary Resuscitation to Medical Students: Virtual Doc

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Background: We developed a virtual reality simulation, Virtual Doc (VD), teaching paediatric cardiopulmonary resuscitation skills. This study evaluates the usability and perceived educational value of VD.

Methods: We recruited University of New South Wales medical students through voluntary convenience sampling. Participants attempted at least one full VD case and completed two mixed-methods questionnaires. Survey 1 assessed game components using 3-point Likert-scale questions. Survey 2 evaluated educational validity using 7-point Likert-scale and yes/no/not sure questions. The responses were analyzed using descriptive statistics.

Results: Twenty-six students were recruited and completed Survey 1 (n=24) and/or 2 (n=23). VD was seen as 'very', 'moderately' or 'not' consistent with real-world clinical experiences by 25.0%, 58.3% and 16.7% of respondents, respectively. 58.3%, 37.5% and 4.2% of participants were 'completely engrossed', 'mildly involved' or 'not involved' in the VD environment, respectively. In terms of gameplay, 69.6% and 73.9% of participants agreed with 'understanding how to play the game' and 'found the gameplay elements useful in understanding cardiopulmonary resuscitation', respectively. 69.6% of participants agreed that VD improved their understanding of cardiopulmonary resuscitation. VD was enjoyed by 91.3% of participants.

Conclusion: Our findings demonstrate a positive response to VD. We plan to further investigate with a randomized controlled trial.