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Title:

A qualitative study of the perspectives of pre-registration pharmacists on the use of virtual patients as a novel educational tool

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Abstract: (Please refer to instructions to authors and example abstract)

Focal Points:

- This study aimed to explore pre-registration pharmacists' perspectives on the usefulness and usability of Virtual Patients (VPs) as a training tool
- Pre-registration pharmacists reported that the VP helped them develop a wide skill set and knowledge base
- Widespread use of VPs may be an effective way of 'bridging the gap' in variation between pre-registration training sectors

Introduction:

Virtual patients are interactive, computer-generated avatars used to simulate clinical scenarios in three-dimensional environments.[1] They have been used in healthcare education and training since 1971 and have been found to aid in knowledge and skill development.[2] The use of VPs in pharmacy is less than in other healthcare professions and there has been no research into their use in pre-registration training. This study aimed to explore pre-registration pharmacists' perspectives on the usefulness and usability of VP case studies as a novel learning tool in their training when compared with non-interactive case studies.

Methods:

Following institutional ethical approval, a purposive sample of UK based pre-registration trainees (2014-2015) was recruited via emails and presentations at study days. Participants were stratified by their sector of training and gender before being randomly assigned to the VP group or control group. Both groups received the same three cases; they only differed in their presentation for comparative measures. The non-interactive cases consisted of background information to the case followed by a set of questions. The case study topics were: emergency hormonal contraception, renal function and childhood illnesses. Participants received each case for a period of one month, before being given access to the other style of case study. After trainees had sat the pre-registration examination, those who had completed all three cases were invited to take part in a qualitative telephone interview. A semi-structured questioning approach was adopted to explore their perspectives on both types of case study, particularly regarding: the topics chosen, ability to help them learn or develop skills, barriers to use, comparison to other learning tools and their thoughts on utilisation within the year. Interviews were digitally recorded and transcribed verbatim before undergoing framework analysis.

Results:

Interviews were conducted with 20 trainees (11 control, 9 VP); two trainees in the control group also completed the VP cases. The sample included 17 females (85%), 3 males (15%) and a mix of those completing pre-registration in hospital (10, 50%) and community (10, 50%). Trainees commented on the novelty of the VP and reported finding it more enjoyable and engaging than the non-interactive cases and other learning tools previously used. The non-interactive cases were reported as useful because they were different to resources which trainees had access to during their training. The VP was described as 'realistic' due to the interactivity of the system. Comments received suggested that participants would utilise the VP in the pre-registration year for individual and group learning and as a practice tool for OSCEs. All trainees reported being enthusiastic about postgraduate use of the VP, for their CPD or to help with extra courses they may undertake. All participants reported developing a wide skill set from both types of case studies, including self-directed learning, decision making, and communication. Problems reported with the VP included the limited size of the question bank and keyword recognition.

Discussion:

Although the sample size for the interviews was limited, the findings suggest that pre-registration trainee participants were enthusiastic about the VP as a training tool and valued it as providing a different learning experience than resources currently available. VPs may offer the potential to bridge the gap in variation in pre-registration training and offer trainees safe practice of experiences they may not otherwise have.

References:

Bracegirdle L, Chapman S. Programmable Patients: Simulation of Consultation Skills in a Virtual Environment. *Bio-Algorithms and Med-Systems* 2010; 6(11):111–115.

Cook D, Triola M. Virtual patients: a critical literature review and proposed next steps. *Medical Education* 2009; 43(4): 303–11.