Are final year physiotherapy students able to independently recognise errors encountered in their own simulated practice?

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Background

Innovations in teaching and learning within physiotherapy education have included various forms of simulation-based education including the use of simulated or standardised patients, clinical training wards and video vignettes.

Only one video analysis study has provided an insight into how qualified physiotherapists communicate with patients about errors of performance\(^1\).

No published studies have explored error recognition abilities of physiotherapy students with regards to their own simulated experience.
Aim

To explore the error recognition ability of final year physiotherapy students when reviewing their own high-fidelity cardio-respiratory simulated learning experience.
Methodology

- Field notes & photographs *(standardisation)*
- Error recognition Focus *(presented)*
- Cardiorespiratory high-fidelity simulated scenario
- Debrief
- Verbatim transcription simulation videos & video-reflexive ethnography interviews
- Video-reflexive ethnography *(Interview)*
- Thematic analysis *(transcripts and videos)*
Video-reflexive ethnography
Video-reflexive interview thematic analysis

- Knowledge and skill deficits
- Professionalism
- Situational analysis
- Behaviour analysis
- Communication
- Clinical reasoning
- Error identification
- Realism
Video-reflexive interview excerpt 1: Error identification

I was just glad it wasn’t a real patient. I don’t know really. [referring to the head of the bed collapsing onto the bedframe]... They are normally electric in hospitals aren’t they? It made me feel quite awful really. Because you’re there to help them and you could have made it worse if it had of been real. Probably would have shook him up really I think.

[F Physio 4]
Video-reflexive interview excerpt 2 & 3: Communication

Ok I asked for the high flow oxygen but perhaps I should have been talking to the patient as to why I wanted to change his oxygen at the same time rather than just talking about him in front of him and putting on an apron and gloves and not really talking to him.

[F HCA 5]: I don’t like the sound of my voice. And I shouted and it goes through me.
[F Physio 7]: I thought that was what you were saying because I feel like really loud and might be a bit condescending to be so loud like the patient is deaf. Yeah because I always listen to my voice and I am thinking why was I so loud, he can hear me.
[F HCA 5]: He is right there and you don’t need to shout at him
[F Physio 7]: Exactly but it’s something that subconsciously I have started doing when I talk to patients and it’s something that I need to tone down.
[F HCA 5]: Yeah they will say if they can’t hear.

[M Physio 2]
Incident analysis

Adapted from Reason, 1990
Case 1 example

Adapted from Reason, 1990
Case 2 example

Adapted from Reason, 1990
Error recognition

107 instances of errors across 12 simulation scenarios

Only 2 (1%) errors were corrected by the participants within the scenario

26 (24%) errors were identified by participants during the video-reflexive interview

79 (74%) errors were unrecognised by participants either when ‘reflecting-in-action’ or ‘reflecting on-action’

Unrecognised errors:
- poor auscultation skills,
- poor suction skills,
- failure to recognise abnormal findings
- failure to seek oxygen prescription
- errors in the delivery of physiotherapy intervention (breathing exercises and position selected)
- communication error
Video-reflexive interview outcomes

- Reflect on prior preparatory experience
- Error recognition
- Perceived impact on patient safety
- Plan future actions
- Transfer of learning beyond simulation
- Ascertain the value of simulated learning
- Reflections of the simulated learning experience
- CPD record
Conclusion

Findings indicate that the use of a video-reflexive interview featuring un-edited ethnographic simulation videos allowed students to:

- Reflexively explore their simulated cardio-respiratory learning experience
- Recognise errors
- Plan appropriate future actions.
Implications

Findings from this research are valuable for:

• informing the development of physiotherapy simulated learning resources
• developing strategies to explore error recognition and patient safety within healthcare.
References


