2023

The use of VR in preceptorship programmes: a critical review of the literature

Macleod, Morwenna

#400WORDS: KNOWLEDGE + ACTION

The use of VR in preceptorship programmes: a critical review of the literature

Morwenna Macleod[1]

[1]Practice Educator, Royal Cornwall Hospitals NHS Trust, TRURO, TR1 3LJ, UK.

Email: morwnna.macleod@nhs.net

Background

Preceptorship was introduced in 1990 as part of the 'Project 2000' nurse education reforms in the UK (Caldwell et al., 2017), defined as 'a period of structured transition for the newly registered practitioner during which [they] will be supported by a preceptor, to develop their confidence as an autonomous professional, refine skills, values and behaviours and to continue on their journey of life-long learning' (Department of Health, 2010: p11).

The Council of Deans (2016) call on nurse educators to implement innovative pedagogical methods to encourage motivation, and nurture life-long learning, and pedagogically verified information technology should be exploited for learning and development (Preker et al.,2019; Butt et al., 2018; Wen and Ma, 2012). The advancement of technology in recent years has seen Virtual Reality (VR) commonplace in undergraduate nurse curriculum (Sharman, 2021; Chang and Lai, 2021).

Method

A structured literature review was undertaken to identify the current evidence base for virtual reality (VR) use within preceptorship programmes.

Results

The NHS Knowledge and Library Hub databases were searched for 'virtual reality', precept*' and 'newly qualified nurse*'. Three hundred and forty-six full text articles were found published in English in the last ten years. These were screened to identify 16 articles that were used in this review. No articles were found that directly associated VR use in nurse preceptorship training, however the 16 articles were utilised to inform the discussion below.

Discussion

The literature suggests that VR is underpinned by a range of teaching methodologies including constructivism (Chen, 2009), experiential (Chang and Lai, 2021), and transformational learning theory (Kleinheksel, 2014).

A wealth of evidence conducted in the pre-registration nursing education setting suggests that VR could be utilised to improve knowledge, skills, and attitudes of learners (Aggarwal et al., 2010; Oermann and Gaberson, 2014). VR as a teaching tool has been validated as a method of bridging the liminal space between higher educational institutions and clinical practice (Weeks et al., 2019), offering diverse learning opportunities including clinical skills, leadership, communication, critical thinking (Forsyth and Jenson, 2012; Bayram and Caliskan, 2020), and even empathy (Khalaila, 2014, Adefila et al., 2016; Hannans et al., 2021). VR also offers several practical benefits such as overcoming practicum location issues (Luctkar-Flude and Tyerman, 2021), a prevalent issue during the pandemic. A comparison study between VR and traditionally taught clinical skills sessions also suggest VR offers economic and ecological savings (Chang and Lai, 2021). It can therefore be surmised that the use of VR should be appraised by stakeholders as this teaching tool could contribute to an effective preceptorship programme, which in turn may reduce transition shock and subsequent burnout.

Conclusion

A critical review of the literature has revealed a clear need for further research on VR in post-registration preceptorship education programmes.

References

Adefila, A., Graham, S., Clouder, L., Bluteau, P. and Ball, S. (2016) 'My Shoes – the future of experiential dementia training?', *The Journal of Mental Health Training, Education and Practice*, 11(2), pp. 91-101.

Aggarwal, R., Mytton, O., Derbrew, M., Hananel, D., Heydenburg, M., Issenberg, B., MacAulay, C., Mancini, M., Morimoto, T., Soper, N., Ziv, A., and Reznick, R. (2010) 'Training and simulation for patient safety', *Quality and Safety in Health Care*,19(2), pp. 34-43.

Bayram, S., and Caliskan, N. (2020) 'The Use of Virtual Reality Simulations in Nursing Education, and Patient Safety', *Contemporary Topics in Patient Safety* 1, DOI: https://doi.org/10.5772/INTECHOPEN.94108

Butt, A., Kardong-Edgren. S., and Ellertson, A. (2018) 'Using game-based virtual reality with haptics for skill acquisition', *Clinical Simulation in Nursing*, 16(3), pp. 25-32.

Caldwell. C, Odelius. A.,Traynor. M., Mehigan. S., and Wasike. M (2017) 'Implementing and assessing the value of nursing preceptorship', *Nursing Management*, 23(9). pp. 35-37.

Chang, Y., and Lai, C. (2021) 'Exploring the experiences of nursing students in using immersive virtual reality to learn nursing skills', *Nurse Education Today*, 97, DOI: https://doi.org/10.1016/j.nedt.2020.104670

Chen, C. (2009) 'Theoretical Bases for Using Virtual Reality in Education', *Themes in Science and Technology Education*, Special Issue, pp. 91-90.

Council of Deans (2016) *Educating the Future Nurse – a paper for discussion*. Available at: https://councilofdeans.org.uk/wp-content/uploads/2016/08/Educating-the-Future-Nurse-FINAL-1.pdf (Accessed 01 July 2022).

Department of Health (2010) *Preceptorship Framework for Newly Registered Nurses, Midwives, and Allied Healthcare Professionals.* Available at: https://www.networks.nhs.uk/nhs-networks/ahp-networks/documents/dh_114116.pdf (Accessed 12 June 2022).

Forsyth, D., and Jenson, C. (2012) 'Virtual Reality Simulation', *Computers Informatics Nursing*, 30(6), pp. 312-318.

Hannans, J., Nevins, C. and Jordan, K. (2021) 'See it, hear it, feel it: embodying a patient experience through immersive virtual reality', *Information and Learning Science*, 122 (7), pp. 565-583.

Khalaila, R. (2014) 'Simulation in nursing education: An evaluation of students' outcomes at their first clinical practice combined with simulations', *Nurse Education Today*, 34(2), pp. 252-258.

Kleinheksel, A. (2014) 'Transformative Learning through Virtual Patient Simulations: Predicting Critical Student Reflections', *Clinical Simulation in Nursing*, 10(6), pp. 301-308.

Luctkar-Flude, M., and Tyerman, J. (2021) 'The Rise of Virtual Simulation: Pandemic Response or Enduring Pedagogy?', *Clinical Simulation in Nursing*, 57(1), pp. 1-2.

Oermann, M., and Gaberson, K. (2014) *Evaluation and Testing In Nursing Education*. 4th edn. New York: Springer Publishing Company.

Preker, A., Beciu, H., and Keuffel, E. (2019) *Financing The Education Of Health Workers: Gaining A Competitive Edge*. London, UK: World Scientific Publishing Co.

Sharman, J. (2021) 'Virtual reality in education', *British Journal of Nursing*, 30(22), pp. 34-38.

Weeks, K., Coben, D., O'Neill, D., Jones, A., Weeks, A. (2019) 'Developing and integrating nursing competence through authentic technology-enhanced clinical simulation education: Pedagogies for reconceptualising the theory-practice gap', *Nurse Education in Practice*, 37, pp. 29-38.

Wen, D., and Ma, X. (2012) 'Explore Sharing Platform of Medical Educational Teaching Resources with IT Technology', *International Conference on Information Computing and Applications*, 308, DOI: https://doi.org/10.1007/978-3-642-34041-3_20