NURSE EDUCATION REPORT

Nursing education, virtual reality and empathy?

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Abstract

An empathic approach to patient-centred care is a core of nursing practice. One of the methods to develop empathy, which is gaining currency is the use of virtual reality simulations in education. This paper posits some questions, does it simply reinforce a 'type' of patient, neglecting caring for the patient as unique, is empathy what results or is it pity, does it result in a greater distance being created between the patient and the health care provider? Can we ever really know what it is like to walk in a patient's shoes when what we experience through virtual reality provides a small snapshot of the vicissitudes of living with an illness or disability. We suggest that what matters most in simulations using virtual reality is how the student exits the experience and if they leave knowing just what patients 'like that' feel, or whether they leave with humility and curiosity.

KEYWORDS

empathy, nurse education, virtual reality

1 | AIM

The increasing adoption of new technologies, such as virtual reality (VR), into nursing practice and nursing education may radically shift nurse–patient relationships, offering potential benefits but also raising critical questions about how best to preserve nursing's core values. Paramount amongst these values is human connection, maintained through face-to-face and tactile interactions that perform multiple functions from listening and soothing, to coaching and evaluating (Dean, Lewis, & Ferguson, 2017).

This discussion paper raises some questions about the use of VR in nursing education, particularly in the oft-promulgated use of VR as a teaching and learning strategy to develop empathy in students. Is it empathy or pity that results and would focusing on empathic curiosity be a more useful objective? The authors suggest more interrogation is needed and long-term follow-up to gauge ongoing benefits.

2 | BACKGROUND

In nursing education, VR technology is being increasingly used in correspondence with the widespread uptake of simulation learning. The drive towards new simulation technologies in nurse education has largely been motivated by imperatives for patient safety and to find alternatives to scarce clinical practice opportunities. Technological solutions allow students to practice and repeat clinical skills in a simulated patient care environment, which is also a more controlled environment than actual health service contexts, where unskilled people can make mistakes (Dang, Palicte, Valdez, & O'Leary-Kelley, 2018). Alongside these benefits comes the obligation in nursing education and student skill development, to ensure that students can be critical, not passive, adopters.

Jaron Lanier, a computer scientist who is considered the founding father of VR, coined the term virtual reality in 1989 (Firth, 2013). Lanier described VR as "a technology that uses computerized clothing

to synthesize shared reality. It recreates our relationship with the physical world in a new plane, no more, no less" (Lanier, 1988). However, to recreate our relationship with the physical world does not mean that VR has the power to recreate human-to-human relationships, which have psychological, social and spiritual dimensions. Yet 30 years after Lanier's founding of VR, the marketing of VR in health care claims that VR can meet these dimensions.

3　|　DISCUSSION

Virtual reality use in nursing education has benefits and risks. A benefit is that VR can enable individual students to repeatedly practise technical skills like sterile technique and emergency response skills at their own pace and time—overcoming the problems of random access opportunities and the resource constraints of nursing laboratories that have limits to how many students can practise at the one time (Dang et al., 2018). In this sense, VR takes advantage of, as Lanier describes, the ability to recreate our relationship with the physical world, enabling physical practice to take place repeatedly. VR can also improve dexterity such as the giving of injections or the insertion of naso-gastric tubes. The use of VR to improve physical skills has already been proven for learning delicate surgical procedures without imperilling a patient (Shao et al., 2020).

In contrast to surgeons, who treat an anesthetized body, nurses and other clinicians treat more than the body; they treat the whole person. Thus, in addition to knowing how to carry out procedures accurately and with precision nursing students also need to develop psychosocial skills that address their patients' psychological, social and spiritual dimensions. After all, an embodied sensitivity to patients is one of the profession's core values. Models of skilfulness in nursing have shown how face-to-face mentorship from other nurses plays a critical role in learning to carry out procedures in empathic ways, whilst simultaneously providing emotional, social and spiritual support (Dang et al., 2018; Sprengel and Job, 2004). It is difficult to imagine students developing psychosocial communication and support skills in a virtual environment.

Empathy, traditionally defined in health care as the cognitive ability to understand the experience of others, by "stepping into the shoes of another" is a basic component of all therapeutic relationships and is part of quality patient care (Hojat, Bianco, Mann, Massello, & Calebrese, 2015). Improving daily empathic practice is not only something that would enhance patient care; it is an essential component of effective diagnosis, treatment and support (Halpern, 2011). Conversely, the lack of empathy has been associated with negative health outcomes (Kee, Khoo, Lim, & Koh, 2018).

Some claim that VR will enable nurses to experientially grasp what patients go through in ways that will transform them into more empathic providers (Bauman, 2012). VR-based simulations of psychopathology, for example, may indeed evoke some experience of the effects of psychopathology and thus raise awareness in the learner (Formosa et al., 2017). However, there remains a gap in evidence to support the claim that such VR learning exercises will help nurses move beyond understanding to action and actually provide more empathic care to patients over time. Moreover, it is specious to claim that experiencing a snapshot of an experience of a disease or disorder is sufficient to develop and maintain empathy and compassionate skills.

4　|　ANALYSIS

Clinical empathy has two aspects: (a) when the nurse's emotions resonate with the patient's emotions and (b) imagining what it is like to be inside the patient's particular situation, which has been defined as empathic curiosity (Halpern, 2011). However, the emotions a nurse feels from experiencing the effects of, say, a loss or a trauma are not, ipso facto, the same as the emotions of a patient who has experienced that loss or trauma. Thus, gaining insight into one's experience of the effects of a disease or disorder through a simulation exercise is quite distinct from coming to feel what a patient feels into practice.

Empathic curiosity focuses on learning more about a specific individual and what they are experiencing. Empathic curiosity requires proximity to a real person. Empathic curiosity in relation to a VR experience asks us to do more than stand in the shoes of another person and acknowledge the experience, but to maintain a position of unknowing and curiosity (Halpern, 2011). VR can stimulate empathic emotions, but VR's ability to provoke ongoing empathic curiosity has not yet been demonstrated.

This lack of evidence notwithstanding, VR proponents have used VR to try to evoke empathy in settings outside health care. For example, the United Nations and non-governmental organizations have collaborated in developing films to help people imagine what it is like to be a refugee or a member of a marginalized group. One such VR film about a young Syrian girl in a refugee camp, "Clouds Over Sidra," led to a statistically significant increase in empathy after viewing; however, there are no data to suggest that these feelings were sustained or translated into behaviour. Indeed, it has been suggested that rather than enabling the viewer to imagine what it was like for the young refugee girl and to have emotions that resonate with what she felt, the experience of the VR film carries the risk of perpetuating distance between the viewer and the "other" (Nash, 2018). In this sense, VR may enable the experience of marginalized people to become a spectacle.

Writers such as Bollmer, (2017) have argued that whilst VR experiences can promote the acknowledgement of another's experience it does not necessarily facilitate a moral understanding. In fact, whilst recognizing the potential good from stepping into the shoes of another, VR runs the risk of creating improper distance. VR may well allow us to acknowledge the experience of another but as Bollmer suggests 'the otherness becomes only what can be absorbed into one's own experience' but not really understood. We may be better served by refusing to take on what it is like to be the other and rather try to understand what it is like for them in a context. Sontag (2002) when writing about photography's view of devastation and death in war warned of the potential to become *voyeurs of suffering*. She

said that we can never *really* know or understand the experiences of the other. Simply watching an experience played out is not the same as living that experience, and the empathy engendered may also be fleeting.

Research on how VR could be designed to create more sustainable other-centred emotions is underway (Formosa, Morrison, Hill, & Stone, 2017; Schutte & Stilinovic, 2017); but, to the best of our knowledge, these studies do not measure empathic curiosity or whether empathy converts into actions. VR experiences addressing such diverse topics as racism, solitary confinement and homelessness vary in the degree to which they generate empathic feelings for a generalized "type" versus empathic curiosity towards specific individuals. We suggest that VR designers think more critically about the need to stimulate ongoing empathic curiosity rather than a sense of knowing what a typical experience of this or that experience is like.

In nursing, there are pitfalls of evoking empathy without simultaneously educating nurses to channel their empathic feelings into empathic curiosity. This is something that has been demonstrated in medical students, for whom empathy can quickly devolve into empathic distress when the student feels that they are unable to create a good health outcome (Decety, Smith, Norman, & Halpern, 2014). Empathic distress can then lead to burnout, provoking a cycle of numbness towards patients and feelings of meaninglessness in nursing work (Boyle, 2011).

In contrast to models of evoking empathy, the authors have long taught the value of inculcating empathic curiosity towards each individual patient by helping doctors and nurses recognize how little they know about each new patient's experiences (Halpern, 2011). This leads to humility and to a much more sustainable version of empathy based on ongoing curiosity about patients through their ups and downs, which does not depend on producing a specific patient outcome.

Further, patients find empathic curiosity therapeutic—they are moved and relieved when a nurse or physician *tries* to understand what, in particular, they are worried about, or hoping for. Thus, we define and operationalize clinical empathy as ongoing engaged curiosity (Halpern, 2011). Specifically, we teach medical and nursing students not to say to patients "I know how you feel," but to instead say something like "Tell me what I'm missing," or "Can you tell me more about that."

We believe that if VR is to help nurses sustain empathic curiosity it needs to provide more than a snapshot of a patient's experience because such glimpses cannot reveal the vicissitudes of living with a complex healthcare problem over time. A person living with a chronic illness is unlikely to be consumed by the problem all of the time. There may be joys and struggles. Only ongoing interest in the person's reality can illuminate these insights and then only if the student has a humble stance allowing them to be open to new learning. VR facilitates sensory immersion but it is not contextual and it does not ipso facto encourage a curiosity about the experience.

Further, if (negative) snapshots of life with a disability are all that are provided—then it may be pity that is all that is invoked—and neither the student nor the subject benefits. It is important then to clarify the differences between empathy and pity. Pity involves a feeling of tenderness for the deficiencies of another. It is looking at another from the outside in, not seeking to imagine their viewpoint from the inside out. It also does not involve the humble stance of unknowing, for the one who pities does so with the assumption that the other needs to be more like the self and needs assistance and mercy, to correct their lack (Gerdes, 2011; Shuman, 2017; Thompson, 2018).

Virtual reality technology provides an important entry point to the next step of learning to empathize with others, which requires acknowledgement that one does not fully understand the particular perspective of the other and this requires humility and curiosity to learn more. This then needs to be directed into appropriate helping behaviours insofar as the point is not for nurses to have edifying experiences in their heads or hearts but to really understand it and *communicate* empathically. We believe that it is essential that the nurse convey to patients that he/she is trying to understand more about them as individuals and that they are respected and not pitied. All of this will require specific communication skills, which, like other interpersonal aspects of nursing, we believe are still best learned through in-person mentorship (Ross, 2015).

5 | CONCLUSION

Virtual reality has the potential to be transformative in the education of the future nursing workforce but education providers, clinicians and the consumers of health care, need to become more actively involved in the development of the technology and work in partnership with the companies who develop the technology (King et al., 2018). Nursing curricula if it is to be relevant to the needs of student learners and graduates in the 21st Century should build curricula, which includes guidelines on how VR is to be used, ensuring that at the heart of the learning experience is the relationship nurses have with their patients.

Virtual reality has much to offer nursing in both education settings and the practice milieu. It does however, require us to situate it, like any disruptive technology, in the context of what we already know about and value in human relationships. The use of VR to teach nurses procedures is valuable, but not if it deletes opportunities to learn from experienced mentors how to convey caring to patients whilst performing such procedures. Finally, using VR to increase nurse empathy is an area that in our view especially requires research and reflection. What matters most is how the nurse or student exits VR experiences—whether they leave feeling they now know just what patients "like that" feel, or whether they leave with humility, curious to learn more from the *individual* patient they next encounter. The point is not for nurses to have edifying experiences in their heads or hearts but to really understand it and *communicate* empathically. And crucial to the entire process is ensuring strategies are integrated into nursing education to ensure that empathy is sustained in a curious way and leads to ongoing behaviour change.

ETHICAL APPROVAL

None.

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