Measuring the impact of a 'point of view' disability simulation on nursing students' empathy using the Comprehensive State Empathy Scale

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ARTICLE INFO

ABSTRACT

Background: Although empathy is an integral component of professional practice and person-centred care, a body of research has identified that vulnerable patients groups frequently experience healthcare that is less than optimal and often lacking in empathy.

Aim: The aim of this study was to examine the impact of an immersive point-of-view simulation on nursing students' empathy towards people with an Acquired Brain Injury.

Setting and Participants: A convenience sample of 390 nursing students from a cohort of 488 participated in the study, giving a response rate of 80%. Students undertook the simulation in pairs and were randomly allocated to the role of either a person with Acquired Brain Injury or a rehabilitation nurse. The simulated 'patients' wore a hemiparesis suit that replicated the experience of dysphasia, hemianopia and hemiparesis.

Design: Characteristics of the sample were summarised using descriptive statistics. A two-group pre-test post-test design was used to investigate the impact of the simulation using the Comprehensive State Empathy Scale. *t*-Tests were performed to analyse changes in empathy pre post and between simulated 'patients' and 'rehabilitation nurses'.

Results: On average, participants reported significantly higher mean empathy scores post simulation (3.75, SD = 0.66) compared to pre simulation (3.38 SD = 0.61); t (398) = 10.33, $p < 0.001$. However, this increase was higher for participants who assumed the role of a 'rehabilitation nurse' (mean = 3.86, SD = 0.62) than for those who took on the 'patient' role (mean = 3.64, SD = 0.68), $p < 0.001$.

Conclusion: The results from this study attest to the potential of point-of-view simulations to positively impact nursing students' empathy towards people with a disability. Research with other vulnerable patient groups, student cohorts and in other contexts would be beneficial in taking this work forward.

1. Introduction

In Australia 20% of the population have a disability, and 1.4 million people have severe disabilities and require help with mobility, communication and/or self-care (Australian Bureau of Statistics, 2015). Although empathy is an integral component of professional practice and person-centred care (Brunero et al., 2010), a body of research has identified that vulnerable patients groups, such as people with a

disability, frequently experience healthcare that is less than optimal and lacking in empathy. This is illustrated in recent healthcare reports which highlight examples of discrimination, systemic indifference and neglect of people with a disability (Department of Health, 2012; Francis, 2013; Parliament of Victoria, 2016).

While empathic care contributes substantially to both physiological and psychosocial patient outcomes (Hojat et al., 2013; Scott, 2011), studies suggest that healthcare professionals sometimes have a limited understanding of the perspectives, concerns, needs and healthcare preferences of people with a disability (Iezzoni et al., 2003; Kitson et al., 2012). For these reasons, educational interventions designed to foster empathy are increasingly being introduced into healthcare curricula. The most effective of these initiatives are immersive point-of-view simulations which allow learners to 'step into a patient's shoes' and 'see the world through their eyes' in order to gain new insights into the feelings, perspectives and experiences of another person (Bearman et al., 2015; Everson et al., 2015).

This paper presents one component of a multi-site mixed methods study that examined the impact of an immersive point-of-view simulation on nursing students' empathy towards people with an Acquired Brain Injury (ABI) using the Comprehensive State Empathy Scale (CSES) (Everson et al., under review).

2. Background

2.1. The Meaning and Meaningfulness of Empathy

Empathy is a multidimensional construct and the literature is replete with various definitions of the term. At a broad level empathy involves the cognitive ability to intuit what another person is feeling (evaluative response), an emotional resonance with those feelings (affective response), and the intention to respond compassionately to the person's needs and concerns (behavioural response) (Hatfield et al., 2011). In the general community there have been generational shifts in empathy levels, particularly over the last decade. A retrospective study from the US which aggregated the findings of 72 studies of college students ($n = 13,737$) identified that empathy levels have declined by > 40% over the last 30 years, with the steepest decline occurring since 2000 (Konrath et al., 2011).

Although, one might expect nursing and medical graduates to have an empathic disposition, evidence suggests that empathy levels can decline by up to 50% during the period of enrolment in an undergraduate healthcare degree (Hong et al., 2012; Ward et al., 2012). This decline in empathy has been attributed to numerous factors including: curricula demands and time constraints leading to prioritisation of technical and procedural skills and knowledge over humanistic values such as empathy (Neumann et al., 2011); limited attention to the formal teaching and assessment of empathy skills; and desensitisation, helplessness and compassion fatigue resulting from exposure to human suffering without appropriate educational preparation and support (Ward et al., 2012).

Empathy is a basic component of all therapeutic relationships (Reynolds and Scott, 1999) and a key factor in patients' definitions of quality care (Rees-Lewis, 1994). There is compelling research about the benefits of healthcare professionals' empathic engagement with patients including: decreased levels of depression, anxiety, distress (Batt-Rawden et al., 2013; Bearman et al., 2015), and increased levels of emotional wellbeing, motivation, satisfaction and adherence to treatment regimens (Kim et al., 2004; Scott, 2011). Empathic encounters with healthcare professionals have also been linked to a range of physiological outcomes such as improved tissue healing, immunity, cancer survival rates (Reynolds and Scott, 1999); and a reduction in diabetic complications, blood pressure and pain (Rees-Lewis, 1994). For healthcare professionals, empathy can enhance diagnostic accuracy and is linked to job satisfaction, resilience and coping skills; whereas some studies suggest that a lack of empathy increases the risk of burnout,

distress, depression and attrition (Batt-Rawden et al., 2013; Scott, 2011).

The relationship between empathy and attitudes to stigmatised and vulnerable groups is of particular concern (Batson et al., 2002), and there are multiple examples of lack of empathy in interactions between healthcare professionals and people from culturally and linguistically diverse backgrounds (Everson et al., 2015; Saha et al., 2008); Aboriginal and Torres Strait Islander People (Kowal and Paradies, 2010; Pedersen et al., 2004); older people (Higgins et al., 2007); people experiencing a mental illness (Muir-Cochrane, 2006); and people with a physical or intellectual disability (Iezzoni et al., 2003).

International reports also describe examples of indifference and appalling suffering where healthcare providers failed to provide empathic care to vulnerable patients. It was against the background of these reports detailing stories of neglect, abuse, marginalisation and discrimination towards people with disabilities (Department of Health, 2012; Francis, 2013; Parliament of Victoria, 2016), that the idea of a point-of-view disability simulation was conceived.

2.2. Empathy Simulations

Educational interventions targeting empathy have had encouraging results in changing healthcare students' attitudes to vulnerable patients and stigmatised groups (Batson et al., 2002). In particular, experiential simulations where learners are asked to 'literally stand in the patient's shoes' have been identified as an effective approach for teaching empathy (Bearman et al., 2015). Examples of studies designed to enhance empathy by providing an appreciation of patients' experiences include the use of audio devices to simulate the experience of hearing voices (Orr et al., 2013); the wearing of physical impairment suits and chronic obstructive pulmonary disease masks (Eymard et al., 2010); and a virtual dementia tour (Beville, 2017). While most of these educational initiatives have been evaluated using qualitative approaches, measurable outcomes have been demonstrated following the introduction of a geriatric medication game where healthcare students assumed the role of an older person experiencing physical, psychological, and financial problems while navigating the healthcare system (Kiersma et al., 2013); and an immersive 3D cultural simulation that allowed learners to take on the role of a 'patient' admitted to a hospital ward in a developing country (Everson et al., 2015).

3. Study Aim

The aim of this study was to examine the impact of an immersive point-of-view simulation on nursing students' empathy towards people with an Acquired Brain Injury (ABI).

4. Methods

4.1. Study Design

This study employed a two-group pre-test post-test design. Comparisons in empathy levels were made at baseline (pre-test) and after the simulation experience (post-test).

4.2. Setting

Participants were a convenience sample of second-year bachelor of nursing students from three campuses of one Australian university.

4.3. Recruitment and Ethical Considerations

An announcement and a participant information statement were posted on an electronic learning management system (Blackboard™), and potential participants were invited to email the researchers if they wished to participate in the study. Although the simulation was a