

Student Nurse Simulation: Preparedness for the Care of People Living with Dementia – A Review

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Abstract

Pre-registration nursing simulation promotes learning in an environment replicating clinical practice and allows nursing students to gain experience before professional registration. Simulation is widely used in Higher Education Institutions (HEIs) to develop student nurses' skills, knowledge, and attitudes in an environment that allows for error, where patients are not exposed to risk. With the challenges being faced by HEIs in finding clinical placements for pre-registration nursing students, simulation is an effective method of addressing the theory-practice gap while enabling student nurses to gain valuable experience in preparation for registered nursing practice. One area underutilized in simulation activity for pre-registrant nurses in dementia care, with many HEIs not delivering specific dementia simulation learning and having little dementia care included in curriculums. With the increasing numbers of people living with dementia accessing health and social care services, this article explores nursing simulation and its role in preparing student nurses for the care of people living with dementia.

Keywords: *Dementia, Simulation, Pre-registration nursing, Higher education institutions, Preparedness, Clinical skills*

1. Introduction

Clinical placement is an integral part of the pre-registration nurse education program, with exposure to nursing practice enabling student nurses to gain insights into the delivery of safe and effective care. Exposure to clinical practice has the added benefit of students achieving a more significant understanding of their skills and abilities and how autonomous practice can be developed. Student nurses need to gain clinical exposure as it prepares students wanting to become registered nurses to consolidate knowledge obtained in the classroom and apply this in the 'real' nursing world.

Undergraduate student nurses can experience a wide range of clinical experience; however, dementia care is often overlooked as an essential training and education component of pre-registration nursing education [1], leaving student nurses' ill-prepared and lacking core nursing skills [2].

Although a mandated part of the Nursing and Midwifery Councils (NMC's) [3] Standards framework for nursing and midwifery education, accessing practice learning opportunities has

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become increasingly challenging for Higher Education Institutions [HEIs]. Ford [4] identifies that universities are faced with 'chaotic' searches trying to identify placements post-COVID-19 pandemic, with some placement areas remaining restricted and not as many placements being accessible.

Added stressors in finding students suitable placements are attributed to the long-term effects of the COVID-19 pandemic and wider factors such as 'Brexit,' where international recruitment has been impacted significantly, leading to a shortfall in the nursing workforce [5]. High rates of burnout in nursing personnel [6], high vacancy and low retention rates [7], lower numbers of full-time community, mental health, and learning disability nurses [8], the ongoing impact of austerity leading to cuts to public services [9] has impacted on fewer opportunities for student nurses to access clinical placements and gain meaningful experience.

The challenges HEIs face in accessing clinical placements have raised the question of how student nurses can best learn and develop skills in delivering effective care if they can access experiential clinical practice. The quality and availability of placements to develop the complex and challenging skills required by the NMC, HEI, and potential employers of future nurses are not accessible. How can this deficit be addressed?

The NMC has recognized challenges to the training and development of the future nursing workforce, and six hundred hours of simulated nursing practice has been permitted as a recognized standard in enabling student nurses to gain valuable clinical experience in situations that can replicate the 'real world' as part of the 2,300 hours mandatory practice learning hours.

Simulation-Based Learning (SBL) is described by Martins (2017) as an active teaching approach that supports students in consolidating knowledge and developing the technical skills required to become a competent professional. These skills can be delivered in classrooms, on campus, or in specifically designated simulation areas in the University setting. The advantages of integrating SBL into nurse education are that critical skills can be developed in a safe environment where the patient experience is not impacted and where students can grow and learn if a clinical placement opportunity is not available.

Foronda et al. [10] evaluated simulation and the impact of this pedagogy in undergraduate nurse education and highlighted students can acquire an extensive range of skills and knowledge, including psychomotor skill performance, social skills, creativity, reasoning, predicting, problem-solving, prioritization, collaboration, development of cognitive knowledge associated with specific nursing activity and communication. This view is supported by Bogosian et al. [11], who suggest that simulation can teach key clinical behaviors in a safe environment, and this supports students in transferring these skills into clinical practice.

Critics of SBL identify that technical difficulties are commonplace, which impacts the acquisition of knowledge by nursing students and leads to increased anxiety, dissatisfaction, and frustration [12]. Another issue is linked to the facilities and costs associated with the delivery of SBL. Lin et al. [13] identify that the financial and physical resources needed to support the delivery of SBL can be substantial and that it is challenging to ascertain if the process improves nursing performance compared to other educational approaches. Ensuring that there is coordination between theory and practice can also be a significant issue in ensuring simulation is harmonious [14] and representative of what is happening in the classroom reflects what is happening in clinical practice

Another element to consider is that SBL can only reflect 'real world' situations to a certain degree and that nurse educators may lack understanding of how SBL should be effectively

incorporated into nursing programs. In addition, insufficient equipment, space, staff training, time, and facilitator competence also impact the effective delivery of SBL [15].

The benefits of implementing SBL into undergraduate nurse education programs are most frequently reported when the high-fidelity simulation is used, as there are clearer benefits to cognitive and psychomotor domains in the students learning and progress [16][17][18]. The supportive environment where learning takes place in the remit of SBL also has the added benefit of developing person-centered attitudes and behaviours and the ability to become more familiar with ethical principles, empathetic practice, and self-awareness [19][20][21].

2. Dementia care

Dementia is a progressive and life-limiting condition, and evidence suggests that people living with dementia experience a higher level of health comorbidities compared to the general population [22]. Public Health England [23] identified that 77% of people living with dementia have at least one secondary health condition, 22% have three or more comorbidities, and 8% have four or more health conditions in addition to the diagnosis of dementia. More recent figures published by Dooley et al. [24] suggest that it is as high as 90% of people living with dementia also have another health condition, which is almost double that of people who do not have a diagnosis of dementia.

The cost of dementia in the UK is currently £34.7 billion a year, which works out to an average annual cost of £32,250 per person with dementia (Alzheimer's Society) [25].

Evidence suggests that people living with dementia do not have their comorbid health conditions managed as well as those living without the condition. Therefore, people living with dementia have a higher incidence of hospital admission [26]. An added complication is around little evidence and research available in understanding how these comorbidities progress and change over time in the context of progressive dementia. There are additional challenges in understanding the interplay between dementia, the progression of the disease, and the impact this deterioration will have on physical health comorbid conditions [27].

In addition to physical health comorbidities, there is significant evidence that highlights people living with dementia are more likely to experience depression [28][29][30], anxiety [31][32][33][34] and may also have premorbid chronic and enduring mental health conditions which evidence suggests increases the likelihood of developing dementia [35].

Another complication to consider is the higher prevalence of delirium in people living with dementia. Delirium is an acute confusional state resulting from an underlying physical health change. Delirium can be triggered by underlying infection, side effects of medication, dehydration, constipation, liver or kidney problems, pain following major surgery, and the sudden withdrawal of drugs and alcohol (Royal College of Psychiatrists) [36]. Although attributed to an underlying physical pathology, the symptoms of delirium often are missed and attributed to psychiatric disorders such as dementia, which leads to misdiagnosis [37].

Harwood (2022) identifies that people living with dementia are usually admitted to hospital for the management of a medical condition because of functional or behavioural difficulties that have resulted in carer breakdown and only rarely, if ever, for the diagnosis or management of the dementia condition. Avoiding hospital admission is very important as people living with dementia are more likely to experience falls, higher incidence of delirium, higher in-patient mortality, multiple moves between wards, lack of person-centered support, functional, higher risk of readmission within 30 days, and further cognitive decline in this environment [38][39][40][41].

2.1. Pre-registration dementia care education

Considering this evidence demonstrating the complexities faced by people living with dementia when accessing healthcare, Wilson [42] identifies that more needs to be done to ensure quality education and training are delivered to all staff that care for people living with dementia. Additionally, Wilson highlights that the content taught in most pre-registration nursing courses is variable. Earlier evidence provided by Alushi et al. [43] recognized that there was little standardized dementia training in pre-registration nursing curricula.

The Higher Education Dementia Network (HEDN) published the first national guidance on dementia education in 2013. This supported the Department of Health [60], Skills for Health and Health Education England's dementia training standards published in 2018. The fundamental principle of both publications is the need to prepare the current and future workforce in health and social care to meet the needs of people living with dementia

The UK's nursing governing body plays a significant role in developing and implementing nurse education. The Nursing and Midwifery Council [NMC] [44] published proficiency standards for registered nurses, yet there is little reference to how dementia care should be delivered in HEIs to student nurses. Consequently, this may have influenced how dementia care is delivered in HEIs for pre-registration nursing students, leaving the individual organizations with little direction about the necessity, relevance, and importance of dementia care education being an integral part of the nursing pre-registration program.

Another challenging element facing pre-registration nursing students being prepared to support people living with dementia relates to the widely held view that dementia care is considered the responsibility of mental health services. This is problematic as this perceived mental health 'ownership' of the care of people living with dementia not only excludes other nursing fields from developing skills and knowledge but there is also a lack of acknowledgment that many people living with dementia are not admitted or referred to services with dementia as a primary presenting problem. There is a risk of diagnostic overshadowing occurring where the diagnosis of dementia becomes the primary focus, and physical comorbidities are ignored or overlooked.

The perceived 'ownership' issue is also problematic, especially regarding the growing concern of mental health nursing education's 'regressive genericism' [45]. The displacement of fundamental skills associated with mental health nursing has shifted towards a more generic nursing role, meaning that mental health nursing students cannot develop skills in dementia care during their pre-registration training [46]. Harvey [47] has recognized that mental health nurses are entering the profession lacking knowledge and skills, specifically in risk assessment and management, because of the dilution of mental health nursing education.

2.2. Preparedness for the care of people living with dementia

One in four hospital beds is occupied by people living with dementia (National Institute for Health and Care Excellence [NICE], 2023), and two-thirds of homecare and care home provision is for people living with Dementia (Alzheimer's Society) [48]. Add to these statistics the number of people anticipated to be living in the community and at home with dementia who receive unpaid care, estimated to be around 565,000 [49]. Then, there is a significant population of people living with dementia who will need to access the health and social care economy as the disease develops and progresses.

More than a fifth of services reviewed by the Care Quality Commission in the UK are rated as failing (Alzheimer's Society) [50], and 49% of UK adults agree that people living with

dementia receive worse care than people diagnosed with conditions such as cancer or heart disease (Alzheimer's Society) [48].

These are concerning figures and demonstrate how services are letting down people living with dementia and their carers when accessing care. Weiss et al. [51] identify four critical areas in the workforce relating to dementia education and training and suggest that education and training for the management of care for people living with dementia are essential, as is the recruitment and retention of a dementia-capable workforce.

Another key consideration to reflect upon is the low inclination for nursing students to work with older adults and people living with dementia [2]. Evidence highlights nursing students experience less favorable attitudes toward dementia care and see this route as a less favorable career path following graduation [52].

Vasquez et al. [2] report that 92% of nursing students surveyed (N=76) indicated that they had no plans to work with people living with dementia on graduation, and 38% reported they would actively avoid a person living with dementia who was agitated. The conclusion of this study recommends that new ways must be developed to inspire and prepare the latest generation of nursing undergraduates to meet the needs of this vulnerable population and to challenge the stigma of caring for older people and people living with dementia.

Long and Hale (2022) suggest that nursing students have a fear of nursing people with dementia and will often graduate from nursing programs experiencing feelings of being ill-equipped to deliver care, apply knowledge, and be effective decision-makers when providing care to people living with dementia. A vital part of the NMC [44] code of professional conduct is for members of the profession to practice effectively; however, how can this be achieved if students are entering the profession without adequate knowledge about even the fundamental approaches to delivering dementia care?

The increased incidence of dementia and the aging population require nursing students to be prepared to meet the needs of people living with dementia. This increase with associated comorbidities linked to dementia and demand for healthcare means that the UK nursing workforce must be prepared for the challenges ahead. There is no cure for dementia, treatment is limited, and investment in dementia research remains inadequate compared to other long-term conditions. Not addressing the issue means there will be modest improvement in the individual's lived experience of healthcare in the context of a diagnosis of dementia, and service providers remain at risk of providing inadequate care and services.

3. Simulation and dementia care

Caring for people living with dementia is often challenging and complex and requires insight into the disease, its progression, and the impact it has on the person. Developing sufficient knowledge to support people living with dementia in hospital and community settings is challenging, and this can be attributed to the lack of clinical experience that student nurses can access through higher education and clinical placement opportunities.

This must be addressed as a matter of priority, and one way that HEIs can support the preparedness of student nurses in caring for people living with dementia is to offer simulation activities on pre-registration nursing programs.

Nursing students will encounter people living with dementia either during their program, while on clinical placement, or once qualified and as part of the registered nursing workforce. The ability to deliver person-centred care and maintain the personhood of the person with dementia can improve outcomes for carers, family members, the individual, and the nurse.

Simulation-based education is an approach that can potentially optimize the knowledge and skills of the aspirant nursing workforce about caring for a person with dementia.

Williams and Daley [53] suggest that a multisensory simulation experience designed to provide an understanding of caring for a person with dementia effectively contributes to the development of effective interventions when caring for the person with dementia.

Kimzey et al. [54] propose that dementia education empowers nursing students to recognize the challenges and complexities of caring for someone with dementia if the values of person-centered care underpin it. If this can be achieved, then there is a direct correlation with increased levels of empathy being demonstrated by the student nurse.

Evidence indicates that when dementia simulation is incorporated into pre-registration education, there is an improvement in the attitudes and knowledge the learner has about dementia [54][55].

The Virtual Dementia Tour [56] was developed to replicate the lived experience of people with dementia and physical health comorbidities. Dressing participants in modified apparel that would serve to simulate the aging body and common experiences of living with dementia, a series of tasks were undertaken to replicate how challenging task completion is when faced with sensory and cognitive impairment. The results of this virtual dementia tour highlight how caregivers' expectations were adjusted following the intervention, and greater appreciation was developed of how care needed to be modified to ensure additional distress was not experienced by the person with dementia. However, this simulation was weighted more towards physical impairments found in aging populations and consequently limited the experience of living with dementia.

Um [57] explored the experiences of a simulation that exposed nursing students to a 100-minute scenario where the nurse would be visiting a patient living with dementia at home. The nursing students were provided with a pre- and post-session debrief. Still, the simulation encouraged student nurses to build rapport, undertake assessment and care planning, provide psychological support, and implement interventions for a person with dementia. This was a small-scale study (N=19), and therefore, it was not easy to gain a broader insight into the impact across wider nursing student populations; however, it was reported that those engaged in the simulation reported competency growth and an enhanced sense of responsibility for delivering effective person-centered care.

A similar study completed by Choi and Um [58] used a larger group of participants (N=69). It recognized the positive impact dementia simulation had on participants' communication skills, critical thinking, and self-efficacy in supporting a person living with dementia in the community.

Wijma et al. [59] developed simulation activities using virtual reality headsets known as '*Through the D'mentia Lens*' [TDL] and aimed to place the participants in different scenarios where they experienced interactions as a person living with dementia and were exposed to a narrative in the headset that spoke to the participant as if it was the voice of the person living with dementia. This multisensory experience demonstrated that the participants developed empathy towards people living with dementia, more confidence in care tasks, and more positive interactions with people living with dementia. Again, a small sample size was used (N=42) for this research, and a lack of a control group made it difficult to confirm that the TDL intervention could demonstrably be associated with improved outcomes in dementia care education. Another limitation is that the participants were identified as 'informal carers,' so there needs to be more evidence to support that this would be effective in pre-registration nurse education.

4. Discussion

It is essential to identify that dementia simulation is no substitute for the clinical experience. The authenticity of clinical care and support for people living with dementia helps to gain valuable insights into the complexity of the condition and the individual lived experience of the disease that is unique and challenging.

Dementia simulation is an emerging and developing area of exploration. Research thus far has been confined to small sample sizes. More must be done to understand on a broader scale the most effective way simulation can be delivered in pre-registration nurse education. HEIs must address the variability and lack of standardization of dementia education and training, and the NMC's failure to recognize the validity and importance of dementia training for pre-registration nurses is compounding the issue.

Making progress in delivering safe and effective dementia care is a national priority. Failure to do so will ensure that people living with dementia who need health and social care support are vulnerable to being supported by nurses who are not prepared to meet their needs. The lived experience of dementia is challenging as the disease progresses without additional issues surfacing linked to accessing care that is being delivered by professional groups having little, if any, training and education on how to meet complex needs often compounded by multiple health comorbidities.

Early signs are promising that simulation activities specifically targeting the care of an individual living with dementia can improve the participant's empathy, understanding, skills, and knowledge. The following steps are vital in ensuring progress is maintained and dementia care continues to develop. Simulation for pre-registration nursing students has the potential to prepare aspirant registered nurses to gain exposure to dementia, and this should not be an activity that is only targeted towards mental health students. It is an opportunity for nurses from all fields of practice to gain valuable insight, knowledge, and skills into a population that is likely to access multiple health and social care environments in which nurses from all fields practice.

The lack of student nurses' preparedness in caring for people with dementia is concerning, and significant advancements need to be made not only in the evidence base to support the benefits of dementia simulation but also in HEI's approach to how dementia care is explored and delivered with student nurses more coherently and uniformly.

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