

Title: Elements of a sustainable, competent and empathetic workforce to support patients with dementia during an acute hospital stay: A comprehensive literature review.

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Abstract

Internationally, there has been a focus on the development of acute hospital workforces to support and care for people with dementia. Recommendations and initiatives to improve person-centred care in acute hospitals have included: education and training, dementia-specific roles, clinical leads and environment changes. The aim of this literature review is to understand the elements of a sustainable, competent and empathetic acute hospital workforce providing person-centred care for patients with dementia. The following databases were searched for literature published in English from January 1st 2006 to 1st August 2016: CINAHL, MEDLINE, PsychINFO, PubMed and Science Direct. A thematic analysis was applied to develop a meta-synthesis of the data. A total of 12 papers with a range of methodological approaches from various countries were included. Emergent themes were: understanding the current workforce, implementation and evaluation of training, and exploration of new and existing roles. An important element was the sustainability of acute hospital workforces competent in dementia care, as studies highlighted an aging nursing population and a high turnover of staff. Dementia awareness training was sustainable, although there was a lack of consistency in the length, content and delivery, which had a viable impact on the provision of empathetic and person-centred care. The lack of consistency of training and specialist dementia roles restricts recommendations from a robust evidence-base.

Key words

dementia, workforce, person-centred care, acute hospitals

Introduction

Dementia is a chronic terminal illness and its severity and impact have been acknowledged to correspond with a person's frailty. 1 Dementia is not restricted to people over the age of 65, but the incidence of dementia is recognised to double every 5 years from the age of 65 to 90, with an exponential increase from 90 onwards. 2 In the UK, 850,000 people are estimated to be living with dementia, and this is expected to rise to just under 1.15 million by 2025. 3

People with dementia are more likely to experience unplanned admissions to hospital with an increased length of stay than people without dementia. 4-5 In the UK, an estimated quarter of all hospital beds are occupied by patients with dementia. 6 Admission to hospital for a person with dementia is acknowledged to be detrimental with an increase in; behavioural and psychiatric symptoms, risk of poor outcomes, higher incidence of harm, and further cognitive decline. 7-9 Lastly, it has been estimated that 32% of patients with dementia experience an episode of acute delirium during their admission. 4 The predicted cost of poor dementia care in hospitals between 2013/2014 in England was estimated at £264.2 million. 5

Governments in England, Scotland, Wales and Northern Ireland are committed to improve dementia care in hospitals and have published regional strategies with a focus on education and training, environments, staffing levels, and provision of person-centred care for people with dementia. 10-13 The Royal College of Nursing 14 and the Kings Fund 15 highlight a number of important principles relating to the development of the acute hospital workforce in dementia care, which require an organisational wide programme for the improvement of person-centred dignified care for all patients. Elements of this approach include: high quality training and education, dementia-specific roles and clinical leads, and the exploration of staffing levels relative to patient's needs.

A focus on dementia education and training for acute hospital staff has been essential as evidence suggested that they lacked relevant knowledge and skills to care and support patients with dementia. 16-18 Poor knowledge negatively affects hospital staff attitudes towards patients with dementia resulting in lack of empathetic care. 18-19 Mandatory dementia awareness training for all staff employed by NHS England was recently introduced by Health Education England. 20 Therefore, NHS Trusts in England rolled out dementia awareness training to over 250,000 staff. 21 However, the collective impact of this approach on knowledge, skills, and attitudes of staff is yet unknown.

Implementing person-centred care in acute hospital settings has been recognised as challenging, as many hospital routines remain task orientated and prioritise acute care. 9, 22 This is confounded by a significant shortage of healthcare professionals to care for older adults, including those with dementia. 23 The shortage of trained healthcare professionals puts added strain on healthcare systems worldwide that are already facing challenges to care for an ageing population with an increased prevalence of dementia. 24-25 Therefore, there is a need to understand how to develop, sustain and support a competent acute hospital workforce in the provision of person-centred care for patients with dementia.

Aim

To understand the elements of a sustainable, competent and empathetic acute hospital workforce in the provision of care and support for patients with dementia.

Methods

The systematic review guidelines 26-27 were followed to complete a comprehensive search of the literature. Recognised medical subject headings (MeSH) were applied in a number of combinations, such as ‘workforce’ and ‘dementia’ and ‘hospital’. The following databases

were searched: Cumulative Index to Nursing and Allied Health (CINAHL), Medline, PsycINFO, PubMed and Science Direct for articles published in English from 1st January 2006 to 1st August 2016. Articles published prior to 1st January 2006 were excluded from this review as a global focus on improving care for people with dementia in acute hospital settings commenced in 2006. 28

Only articles reporting primary data on developing and sustaining an acute hospital workforce competent in dementia care were included in the review. Articles were excluded if they were audits/reports of training programmes with no outcome data on the impact on knowledge, skills or practices of healthcare professionals.

The results of the review process included identification of the removal of duplicate papers, titles and abstracts were read and finally full papers were read by both authors. The review process identified 708 articles following the removal of 201 duplicate articles, 666 were removed following title screening, and 25 were removed following abstract screening, leaving 17 full papers which were explored to ensure each study met above inclusion and exclusion criteria, with the final inclusion of 12 articles.

All articles were read and re-read, data extraction of important concepts and issues was completed. Due to the different methodological approaches of the studies a meta-synthesis rather than a meta-analysis was completed. 29

Overview of Articles

Included papers (n=12), with a range of methods: qualitative, 30-32 quantitative 33-36 and mixed methods, 37-41 completed in a number of countries (Table 1).

Three emergent themes from the meta-synthesis included; understanding the current workforce, implementation and evaluation of training, and the exploration of new and existing roles.

Understanding the current workforce

A comprehensive understanding of the provision of dementia care by the current acute hospital workforce emerged through reviewing the: preparation of healthcare professionals including their undergraduate programmes, 32 impact of person-centred initiatives on healthcare professionals attitudes and knowledge, 40 nurses intentions to remain in acute elderly care, 38 and the identification of required competencies of healthcare professionals by people with dementia and their families. 31

Theoretical and practical knowledge of dementia was emphasised as important by all healthcare professionals and by people with dementia and their families. 31-32 Amongst healthcare professionals there was a consensus that their training and education had not prepared them to care for acutely unwell patients with cognitive impairment. 32 Nurses valued education and professional development opportunities, as well as the recognition of their skills and knowledge by patients and colleagues. 38

People with dementia and their families identified the need for healthcare professionals to be competent in tailoring care to the individual patient, in a truly person-centred approach. 31 However, nurses identified the emotional struggle of implementing this approach within an increasing workload and a lack of support, which impacted negatively on their psychological well-being, and the conclusion that they were not the 'right person' for the job. 32, 38 Nurses also discussed their lack of influence on policies, procedures and practices, which left them feeling disempowered within a system focused on legal responsibilities and liabilities. 38

People with dementia and their families also identified the importance of advanced communication skills of healthcare professionals. 31, 40 On the other hand, healthcare professionals acknowledged difficulties in communicating with people with cognitive impairment, which impacted on their confidence to care for these patients. 32, 40 However, healthcare professionals with life experiences of having cared for family members with dementia were able to understand and care for patients with challenging behaviours and support their families. 32

Innes et al. 40 identified that a kind and well-meaning workforce is not sufficient to provide skilled person-centred care for the complex needs of patients with dementia. Therefore, an important element for the development of the current acute care workforce is further education and training to enable the provision of person-centred care through skilled communication, whilst simultaneously developing supportive organisational structures, managers and colleagues.

Implementation and evaluation of training

The implementation of training programmes to support the provision of person-centred care varied widely and included both directive and non-directive approaches. Two directive programmes included the brief psychological training interventions (BPTI) 41 and the 'Getting to Know Me' initiative. 33 The aim of the BPTI was to provide staff with practical skills to support patients with dementia. 41 Whilst, the 'Getting to Know Me' package aimed to improve staff knowledge and challenge their beliefs of dementia, with the implementation of a 'Getting to Know Me' card, that is completed with the person with dementia and their families to support their care whilst in hospital. 33 A non-directive approach was an ethnodrama 'Barbara's Story', which aimed to emotionally engage staff through a series of films that showed Barbara's experiences and perspectives of everyday healthcare. 30

The remaining three classroom based programmes adopted a module approach to the delivery of information. Galvin et al. 39 implemented a five module programme, which could be delivered in modules or as a one day workshop. A modified version of this approach was implemented by Palmer et al. 35 with the inclusion of a non-directive, 'Call to Action' to support all attendees to identify an element in their own work areas that could be adapted to improve care. Lastly, person-centred care training programme for acute hospitals (PCTAH) was developed and delivered at two levels; foundation and intermediate, both of which could be undertaken as workshops or individual modules. 36

The evaluation of each training programme was completed via different validated questionnaires or the development of new questionnaires. Therefore, although knowledge and confidence were measured, the different approaches made it difficult to accurately compare results. However, improved awareness, knowledge and attitudes were reported, 33, 36, 41 alongside an increase in; confidence and skills to support and care for patients with dementia. 33, 35-36, 39, 41 The only training programme delivered at two levels, the PCTAH, highlighted foundation level training impacted positively on staff attitudes of dementia, but intermediate training was required for development of knowledge, provision of person-centred care and satisfaction with working and caring for people with dementia. 36 The ethnodrama of Barbara's Story evaluation reported a reflexive and empathetic response from staff, with a change in both the way staff approached people with dementia and a change within the whole NHS Trust towards dementia. 30

A common issue across classroom based programmes was poor attendance and completion of post-test questionnaires. 33, 35, 39, 41 Poor attendance was hypothesised to be related to the difficulty in releasing staff from clinical responsibilities. Whereas, this was not true for attendance at the showing of Barbara's Story, which had the support of organisational

structures, managers, board members and the Chief Nurse. 30 The attrition of post-test questionnaires demonstrates a challenge within hospital environments to complete a robust evaluation of training, with staff leaving the organisation being hypothesised as having a major impact.

Exploration of new and existing roles

In Scotland, the role of Dementia Champions was implemented in acute hospitals to act as Change Agents. 37 During the Dementia Champions programme, healthcare professionals spent half a day in the community with people with dementia and their families, which challenged their perspectives, beliefs and impact of dementia on families. Healthcare professionals were shocked to see positive attitudes and hear laughter amongst both people with dementia and their families. On reflection of this experience, healthcare professionals realised the need to address the accepted practice that occurs in acute settings, but simultaneously recognised the barriers to do so. However, commencement of action plans included changes to the: environment, education, identifying people with dementia, involving relatives and carers, and identifying and managing delirium. 37

Page and Hope 34 explored the knowledge and competence of specialist dementia nurses, to understand the consistency or inconsistency within these roles. Specialist nurses who reported higher levels of knowledge and competence were more likely to have post-graduate qualifications and were working in teams with a strong medical model, such as neuroscience, neurology or research. Specialist nurses highlighted the need to further understand legal and ethical elements of dementia care, including a human rights approach. These nurses stated they did not have the capacity or authority to implement changes or influence the development of dementia care, as their roles were predominantly to support people with dementia to live and cope with a diagnosis.

New and existing dementia specific roles within acute care settings are being developed and evaluated. These roles have a focus on leading the implementation of interventions and specialist dementia care of which education and knowledge remain important components.

Discussion

Elements of a sustainable, competent and empathetic workforce to support patients with dementia during an acute hospital stay emerged from the understanding of the current workforce, implementation and evaluation of dementia training and an exploration of new and existing roles.

Understanding the current workforce

An element highlighted from this review was healthcare professionals' lack of preparation to care for and support acutely unwell patients with cognitive impairment. 32 This is consistent with previous findings, as nurses and doctors have both reported receiving insufficient education and training to support acutely unwell patients with dementia. 42-43 Traditionally, undergraduate health professional programmes have focused on the medical model of the provision of short-term interventions related to positive outcomes from an acute medical condition, rather than more complex psychosocial care related to long term conditions that also impact on cognition, such as dementia. 16 However, a number of undergraduate programmes have been developed to focus on person-centred care and long-term conditions, 44 and more recently in the UK mandatory inclusion of dementia training in all undergraduate healthcare programmes.

An important aspect of understanding the current workforce included a focus on sustainability, as nurses working in acute older person care were more dissatisfied than their community counterparts and younger nurses contemplating leaving their acute posts. 38 This

trend leaves an added dearth of experienced and trained members of the workforce, which is as already recognised as an aging workforce. 34 The retention of nurses in older person and dementia care includes the development of; supervision, training in skills, leadership and teamwork as well as increasing staffing levels. 38

Nurses from different studies in this review believed they lacked the authority or power to influence or implement changes in practice, 34, 38 which undermines programmes such as the Dementia Champions. 37 Therefore, there is a need for a clear focus to develop organisation and clinical support for the nursing workforce, including nurses in both decision-making processes and in the development of workplace environments and structures. 32, 38

Understanding the current workforce has been highlighted as important as people with dementia and their family members were able to identify staff who only dealt with the practicalities of caring compared to those who gave of themselves in caring, demonstrating they cared about the people they worked with and related to them as people. 31

Implementation and evaluation of training

The implementation of dementia training for the workforce of acute hospitals included in this review varied significantly, from direct to non-direct training, classroom to clinical settings and modules to full day workshops. A recent audit of 28 organisations in the UK, including Acute NHS Trusts found 19 different dementia education and training packages available, 45 demonstrating an almost ad hoc approach to the development of packages that were not equally structured or assessed. Similar to a number of studies included in this review, Mayrhofer and Goodman 45 concluded there was limited evidence of experiential learning following dementia awareness, although there was enthusiasm and interest in the training,

which was possibly a response to the targets set by Health Education England and Commissioning for Quality and Innovation (CQUIN) targets. 46

However, there has been a focus on nursing competences for over a decade in dementia care and across all care settings. 47 A review of the literature identified ten dementia competencies, which ranged from awareness, communication, environment, to person-centred care, with increased competence over five levels of novice, beginner, competent, proficient and expert. 47 However, Mustafa et al. 48 identified four categories of an educational strategy for the dementia workforce including; basic awareness, intermediate level, advanced level and another level of dementia awareness for managers. In the UK, these have been transcended by the three tiers/levels of the Dementia Core Skills Education and Training Framework. 49 Due to the publication of the Framework in 2015, dementia training and education packages are only now being mapped against these recommended competences. The competencies within this framework are not situation specific and are therefore open to interpretation. The full impact of the framework to support consistencies of dementia training and education is yet unclear.

The evaluation of dementia training for the workforce of acute hospitals included in this review also varied significantly, with a concentration on a change in staff knowledge and attitudes rather than outcomes or changes in care and support provided to patients with dementia. The lack of a consistent approach to formally evaluate dementia education has been previously acknowledged, with a further criticism that evaluations are rarely published and therefore the literature remains incomplete. 9

In the current review dementia awareness training did impact positively on staff attitudes, which is important as previous studies have suggested a link between negative staff attitudes towards patients with dementia and forms of restraint such as chemical or physical, 50 and

resistance to change care practices. 51 Therefore, the approach of Barbara's Story, which impacted on staff emotionally and provoked a reflection on how they are perceived by patients may be as important as the provision of dementia education to change the culture of dementia care within acute hospitals. 30

Dementia education and training did not occur in isolation as the majority of studies included in this review simultaneously implemented other initiatives to improve care for patients with dementia. The majority of hospitals have addressed the recommendations of Kings Fund 'Enhancing the Healing Environments' 52 with a system wide multiple initiative approach, such as changes to the physical environment, dementia training, engagement with the local Alzheimer's Society, use of twiddlemuffs, and implementation of activities by healthcare assistants and volunteers. 53-54 Therefore, training and education is only one element of developing a dementia workforce in an acute setting, a broad system wide approach is required to enable staff to continue to embed good clinical practice against other committing commitments and demands. 55

Exploration of new and existing roles

New roles, such as Dementia Champions are now being implemented in acute care environments to act as Change Agents, with some positive results. 37 A number of papers were identified, which discussed the implementation of new roles, however these were not included in this review as they lacked outcome data of staff knowledge, skills or competencies or outcomes for patients and their families. 56-58 These studies implemented a Mental Health Nurse who supported healthcare professionals, especially adult nurses in acute general hospitals, 56-58 this approach was developed from the recommendations and guidance of the National Dementia Strategy for England. 10 The Dementia Nurse Specialist was reported to spend more time with staff engaged in education than patients and families

58 and in the other two examples, 56-57 the nurses spent more time assessing patients and talking to families. The improved understanding of dementia and delirium by staff was reported 57, but no data was provided to support this conclusion. These papers demonstrate that similar initiatives are being developed and implemented, but without consistent role titles or robust evaluations. The implementation of these different roles has caused confusion not only across acute hospitals but also across statutory and third sector, as well as health and social care settings. 59

Further robust evaluation of the roles of specialist nurses in dementia in acute hospital settings is required as this approach relies on a small or even one member of staff to act as change agents for a large institution and this approach should be implemented with caution.

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Conclusion

Dementia training and education impacts positively on changing acute hospital staff attitudes toward caring for patients with dementia. However, due to the lack of consistencies across the development, implementation and evaluation of training and education programmes provided to acute staff in hospitals, the impact on the implementation of person-centred care is yet unclear. One example of an ethnodrama appeared to have a positive impact on the culture of the workforce with reference to dignity and support of all patients. Further robust studies exploring the impact of dementia training and education based on competence frameworks and outcomes for patients needs to be explored, alongside the preparation of the workforce during their undergraduate programmes.

The sustainability of the acute care workforce in person-centred care needs to be explored alongside other initiatives being implemented in hospital settings, as all aim to support

person-centred care. The exploration of specialist roles in dementia need to occur, current research and literature is lacking robust reporting of the development, implementation and evaluation of registered mental health nurse (RMN) roles within the acute hospital setting. An understanding of how these roles support the development of the workforce to provide person-centred care, and facilitate improvements in dementia knowledge, skills and competences is urgently required.

Finally, nurses are often the front line providing care to patients with dementia in acute hospitals and yet felt they did not have the ability to influence or change processes that would improve care. Further involvement of nurses in all aspects of organisational structures and system wide interventions to improve person-centred care needs to be adopted as a matter of urgency.

References

1. Rockwood K, Song X, MacKnight C, Bergman H, Hogan DB, McDowell I, et al. A global clinical measure of fitness and frailty in elderly people'. *Can Med Assoc J* 2005;173(5):489–95. doi: 10.1503/cmaj.050051.
2. Corrado MM, Brookmeyer R, Paganini-Hill A, Berlau D, Kawas CH. Dementia incidence continues to increase with age in the oldest old: The 90+ study. *Ann Neurol* 2010;67(1):114-121. doi: 10.1002/ana.21915.
3. Prince M, Knapp M, Guerchet M, McCrone P, Prina M, Comas-Herrera A, et al. *Dementia UK: Update*. London: Alzheimer's Society. 2014.
https://www.alzheimers.org.uk/site/scripts/download_info.php?fileID=2323 Accessed January 9th, 2017.
4. Fong TG, Jones RN, Marcantonio ER, Tommet D, Gross, AL, Habtemariam D, et al. Adverse outcomes after hospitalization and delirium in persons with Alzheimer's disease. *Ann Intern Med* 2012;156(12):848-856. doi: 10.7326/0003-4819-156-12-201206190-00005.
5. Boaden A. *Fix Dementia Care – Hospitals*. Alzheimer's Society: London. 2016
https://www.alzheimers.org.uk/site/scripts/download_info.php?fileID=2907 Accessed January 9th, 2017.
6. Royal College of Nursing. *Dignity in Dementia; Transforming General Hospital Care*. 2011
https://www2.rcn.org.uk/_data/assets/pdf_file/0019/405109/RCN_Dementia_project_professional_survey_findings.pdf Accessed January 9th, 2017.
7. Sampson EL, White N, Leurent B, Scott S, Lord K, Round J, et al. Behavioural and psychiatric symptoms in people with dementia admitted to the acute hospital: prospective cohort study. *Brit J Psychiat* 2014;205(3):189-196. doi: 10.1192/bjp.bp.113.130948.
8. Hermann DM, Muck S, Nehen HG. Supporting dementia patients in hospital environments: health-related risks, needs and dedicated structures for patient care. *Eur J Neurol* 2015;22(2):239-e18. doi: 10.1111/ene.12530.
9. Dewing J, Dijk S. What is the current state of care for older people with dementia in hospital? A literature review. *Dementia* 2014;15(1):106-24. doi: 10.1177/1471301213520172.
10. Department of Health. *Living well with Dementia: A national dementia strategy*. 2009
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/168221/dh_094052.pdf Accessed January 9th, 2017.
11. The Scottish Government. *Scotland's national dementia strategy 2010*
<http://www.gov.scot/Resource/Doc/324377/0104420.pdf> Accessed January 9th, 2017.

12. Welsh Assembly Government. National dementia vision for Wales. Dementia supportive communities. 2011 <http://gov.wales/docs/dhss/publications/110302dementiaen.pdf> Accessed January 9th, 2017.
13. Department of Health Social Services and Public Safety Northern Ireland. Improving dementia services in Northern Ireland. A regional strategy. 2011 <https://www.health-ni.gov.uk/sites/default/files/publications/dhssps/improving-dementia-services-2011.pdf> Accessed January 9th, 2017.
14. Thompson R, Heath H, Mills N. Dementia. Commitment to the care of people with dementia in hospital settings. Royal College of Nursing London: UK. 2011 https://www2.rcn.org.uk/_data/assets/pdf_file/0011/480269/004235.pdf Accessed January 9th, 2017.
15. Oliver D, Foot C, Humphries R. Making our health systems fit for an ageing population. The Kings Fund, London: UK. 2014 https://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/making-health-care-systems-fit-ageing-population-oliver-foot-humphries-mar14.pdf Accessed January 9th, 2017.
16. Cowdell F. Care of older people with dementia in an acute hospital setting. Nursing Standard 2010;24(23):42-48.
17. Chater K, Hughes N. Strategies to deliver dementia training and education in the acute hospital setting. Journal of Research in Nursing 2012;18(6):578-593. <http://journals.sagepub.com/doi/pdf/10.1177/1744987112446242> Accessed January 9th, 2017.
18. Calnan M, Tadd W, Calnan S, Hillman A, Read S, Bayer A. 'I often worry about the older person being in that system': exploring the key influences on the provision of dignified care for older people in acute hospitals. Ageing Soc 2013;33:465-485. doi: 131.251.254.50.
19. Jonas-Simpson C, Mitchell GJ, Carson J, Whyte C, Dupuis S, Gillies J. Phenomenological shifts for healthcare professionals after experiencing a research-based drama on living with dementia. J Adv Nurs 2012;68(9):1944-1955. doi: 10.1111/j.1365-2648.2011.05877.x.
20. Department of Health. Delivering high quality, effective, compassionate care: Developing the right people with the right skills and the right values. A mandate from the Government to Health Education England: April 2014 to 2015. 2013 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/203332/29_257_2900971_Delivering_Accessible.pdf Accessed January 9th, 2017.
21. Department of Health. Delivering high quality, effective, compassionate care: Developing the right people with the right skills and the right values. A mandate from the

Government to Health Education England: April 2014 to March 2015. 2014
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/310170/D_H_HEE_Mandate.pdf Accessed January 9th, 2017.

22. Webster J. Improving care for people with dementia in acute hospital: the role of person-centred assessment. *Quality in Ageing and Older Adults* 2011;12(2):8-94.
23. Cottingham AH, Alder C, Austrom MG, Johnson CS, Boustani MA, Litzelman DK. New workforce development in dementia care: screening for 'caring': Preliminary Data. *J Am Geriatr Soc* 2014;62:1364-1368. doi: 10.1111/jgs.12886.
24. Institute of Medicine. Retooling an aging America: building the health care workforce. Washington DC: National Academic Press; 2008.
25. Crisp N, Chen L. Global supply of health professionals. *New Engl J Med* 2014;370(10):950-7. doi: 10.1056/NEJMr1111610.
26. Bettany-Saltikov J. *How to Do a Systematic Literature Review in Nursing*. Ashford Colour Press Ltd.: Gosport, UK; 2012.
27. Wright RW, Brand RA, Dunn W, Spindler KP. How to write a systematic review. *Clin Orthop Relat R* 2007;455:23–29. doi: 10.1097/BLO.0b013e31802c9098.
28. World Health Organisation. Neurological Disorders: Public Health Challenges. 2006
http://www.who.int/mental_health/neurology/neurological_disorders_report_web.pdf
Accessed January 9th, 2017.
29. Walsh D. Meta-synthesis method for qualitative research: a literature review. *J Adv Nurs* 2005;50(2):204-211. doi: 10.1111/j.1365-2648.2005.03380.x.
30. Baillie L, Sills E, Thomas N. Educating a health service workforce about dementia: a qualitative study. *Quality in Ageing and Older Adults* 2016;17(2):119-130.
31. Benbow SM, Tsaroucha A, Ashley M, Morgan K, Kingston P. Patients' and carers' views on dementia workforce skills. *Journal of Mental Health Training, Education and Practice* 2011;6(4):195-202.
32. Griffiths A, Knight A, Harwood R, Gladman JRF. Preparation to care for confused older patients in general hospitals: a study of UK health professionals. *Age Ageing* 2014;43:521-527. doi: 10.1093/ageing/aft171.
33. Elvish R, Burrow S, Cawley R, Harney K, Graham P, Pilling M. 'Getting to Know Me': the development and evaluation of a training programme for enhancing skills in the care of people with dementia in general hospital settings. *Aging Ment Health* 2014;18(4):481-488. doi: 10.1080/13607863.2013.856860.
34. Page S, Hope K. Towards new ways of working in dementia: perceptions of specialist dementia care nurses about their own level of knowledge, competence and unmet

- educational needs. *Journal of Psychiatric and Mental Health Nursing* 2013;20:549-556. doi: 10.1111/jpm.12029.
35. Palmer JL, Lach HW, McGillick J, Murphy-White M, Carroll MB, Armstrong J. The Dementia Friendly Hospital Initiative Education program for acute nurses and staff. *Journal of Continuing Education of Nurses* 2014;45(9):416-424. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4254707/> Accessed January 9th, 2017.
 36. Surr CA, Smith SJ, Crosslands, J, Robins J. Impact of a person-centred dementia care training programme on hospital staff attitudes, role efficacy and perceptions of caring for people with dementia: A repeated measures study. *Int J Nurs Stud* 2016;53:144-151. doi: 10.1016/j.ijnurstu.2015.09.009.
 37. Banks P, Waugh, A, Henderson J, Sharp B, Brown M, Oliver J, et al. (2014). Enriching the care of patients with dementia in acute settings? The Dementia Champions Programme in Scotland. *Dementia* 2014;13(6):717-736. doi: 10.1177/1471301213485084.
 38. Chenworth L, Merlyn T, Jeon Y-H, Tait F, Duffield, C. Attracting and retaining qualified nurses in aged and dementia care: outcomes from an Australian study. *J Nurs Manag* 2014;22:234-247. doi: 10.1111/jonm.12040.
 39. Galvin J, Kuntemeier B, Al-Hammadi N, Germino J, Murphy-White M, McGillick J. "Dementia-friendly Hospitals: Care not Crisis". An educational program designed to improve care of the hospitalized patient with dementia. *Alzheimer Dis Assoc Disord* 2010;24(4): 372-379. doi: 10.1097/WAD.0b013e3181e9f829.
 40. Innes A, Kelly F, Scerri C, Abela S. Living with dementia in hospital wards: a comparative study of staff perceptions of practice and observed patient experience. *International Journal of Older People Nursing* 2016;11:94-106. doi: 10.1111/opn.12102.
 41. Smythe A, Jenkins C, Harries M, Wright J, Bentham P, Oyebode J. Evaluation of dementia training for staff in acute hospital settings. *Nurs Older People* 2014;26(2):18-24. doi: 10.7748/nop2014.02.26.2.18.e527.
 42. Coffey A, Tyrrell M, Buckley M, Manning E, Browne V, Barrett A. A multicentre survey of acute hospital nursing staff training in dementia care. *Clinical Nursing Studies* 2014;2(4):39-46. doi: <http://dx.doi.org/10.5430/cns.v2n4p39>.
 43. Hynninen N, Saarnio R, Isola A. The care of older people with dementia in surgical wards from the point of view of the nursing staff and physicians. *J Clin Nurs* 2014;24:192-201. doi: 10.1111/jocn.13004.
 44. Banerjee S, Farina N, Daley S, Grosvenor W, Hughes L, Hebditch M. How do we enhance undergraduate healthcare education in dementia? A review of the role of

- innovative approaches and development of the Time for Dementia Programme. *Int J Geriatr Psychiatry* 2016 doi: 10.1002/gps.4602.
45. Chenworth L, Jeon Y-H, Merlyn T, Brodaty H. A systematic review of what factors attract and retain nurses in aged and dementia care. *J Clin Nurs* 2010;19:156-167. doi: 10.1111/j.1365-2702.2009.02955.x.
 46. Mayrhofer A, Goodman C. Workforce development in dementia care through education and training: An audit of two countries. *The Journal of Mental Health Training, Education and Practice* 2016;11(2):112-121.
 47. NHS Commissioning Board. Commissioning for quality and innovation (CQUIN): 2013/2014 guidance. 2013 <https://www.england.nhs.uk/wp-content/uploads/2013/02/cquin-guidance.pdf> Accessed January 9th, 2017.
 48. Traynor V, Inoue K, Crookes P. Literature review: understanding competence in dementia care. *J Clin Nurs* 2011;20:1948-1960. doi: 10.1111/j.1365-2702.2010.03511.x.
 49. Mustafa N, Tsaroucha A, Le Mesurier N, Benbow SM, Kingston P. Educating and training the workforce to work with people with dementia: two projects from the United Kingdom. *Educational Gerontology* 2013;39:398-412. doi:10.1080/03601277.2012.701102
 50. Skills for Health. Dementia Core Skills Education and Training Framework. 2015 <http://www.skillsforhealth.org.uk/images/projects/dementia/Dementia%20Core%20Skills%20Education%20and%20Training%20Framework.pdf?s=cw2> Accessed January 9th, 2017.
 51. Nakahira M, Moyle, W, Creedy D, Hitomi H. Attitudes towards dementia-related aggression among staff in Japanese aged care settings. *J Clin Nurs* 2009;18:807-816. doi: 10.1111/j.1365-2702.2008.02479.x.
 52. Nilsson A, Lindkvist M, Rasmussen BH, Edvardsson D. Staff attitudes towards older patients with cognitive impairment: Need for improvements in acute care. *Journal of Nursing Management* 2012;20:640-647. doi: 10.1111/j.1365-2834.2012.01406.x.
 53. King's Fund. The King's Fund's Enhancing the Healing Environment Programme 2009-2012. 2013 www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/developing-supportive-design-for-people-with-dementia-kingsfund-jan13_0.pdf Accessed January 9th, 2017.
 54. Brooke J, Herring S. Development of an activities care crew to support patients. *Nurs Older People* 2016;28(8):20-25. doi: 10.7748/nop.2016.e835.
 55. McDonnell A, McKeown J, Keen C, Palfrevman J, Bennett N. Introducing on-ward volunteers to work with patients with dementia. *Nurs Older People* 2014;26(4):28-33. doi: 10.7748/nop2014.04.26.4.28.e572.

56. Perry M, Draašković I, Lucassen P, Vernooij-Dassen M, Van Achterberg T, Rikkert MO. Effects of educational interventions on primary dementia care: A systematic review. *Int J Geriatr Psychiatry* 2011;26(1):1-11. doi: 10.1002/gps.2479.
57. Boersma, M. A reflection on nurse advocacy for the person experiencing dementia whilst an in-patient in the general acute sector. *International Practice Development Journal* 2012;2(1)(1).
http://www.fons.org/Resources/Documents/Journal/Vol2No1/IPDJ_0201_01.pdf
Accessed January 9th, 2017.
58. Law E. Delirium and dementia in acute hospitals: assessing the impact of RMN input. *Nurs Older People* 2008;20(9):35-39. doi: 10.7748/nop2008.11.20.9.35.c6811.
59. Elliot R, Adams, J. The creation of a Dementia Nurse Specialist role in an acute general hospital. *J Psychiatr Ment Health Nurs* 2011;18:648-652. doi: 10.1111/j.1365-2850.2011.01771.x.
60. Benbow SM, Kingston P. Developing the dementia workforce: Numerus turbatio – ‘Total confusion’. *Dementia* 2010;9(3):307-310. doi: 10.1177/1471301210375341.
61. Hendy J, Barlow J. The role of organisational champion in achieving health system change. *Soc Sci Med* 2012;74(3):348-355. doi: 10.1016/j.socscimed.2011.02.009.

Figure 1: Literature search outcome (PRISMA)

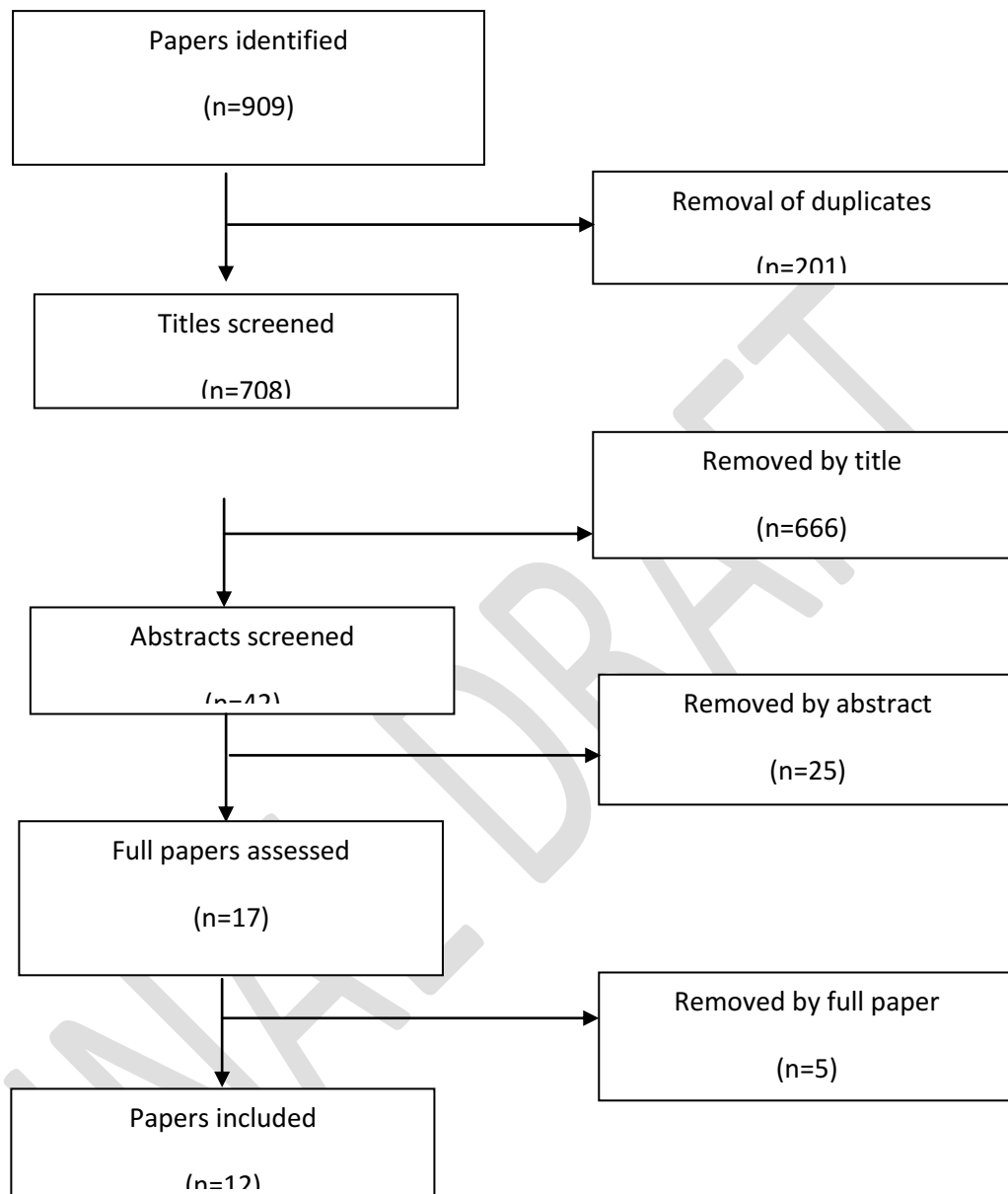


Table 1: Temporary table of all included studies – will separate when clear themes identified

Author Year, Country	Aim	Design and Data collection	Participants	Results	Conclusion
Baillie et al. 2016, England	Exploration of staff perspectives of the effect of an ethnodrama (Barbara's Story) on themselves, colleagues and the organisation	Qualitative applying a social constructionism approach Data collection at two time points via focus groups and interviews	Staff from one large NHS Trust: Time point 1: 10 focus groups; nurses (n=5), community (n=1), AHPs (n=2), medical (n=1), non-clinical (n=1) 1 interview Total 68 staff Time point 2: 16 focus groups; nurses (n=10), community (n=1), ANPs (n=2), medical (n=1), non-clinical (n=2) 3 interviews Total 80 staff	Framework analysis Impact of Barbara's Story: -raised awareness of dementia -engaged staff emotionally -prompted empathetic responses -improved interactions with patients Senior leadership engagement supported a perceived positive impact on organisational culture	Sustainable dementia education delivered to a whole workforce that raised awareness, empathy, and person-centred care, impacting on staff behaviour and organisational culture
Banks et al. 2014, UK	To evaluate the Scottish Dementia Champions programme to prepare NHS and Social Service	Mixed methods Quantitative repeated measures Pre and Post training: -Approaches to	113 participants 78 nurses 20 allied healthcare professionals 10 occupational therapists 6 physiotherapists 2 salt and language therapists	ADQ: Pre- programme (n=83) Post- programme (n=89) Participants demonstrated a statistically significant positive change in their person-centred approach to dementia care (p=0.04, independent samples t-	The programme included half a day in the community which supported a positive change in attitudes of participants towards people with dementia and their families

	Dementia Champions working in acute settings as Change Agents for practice	Dementia Questionnaire (ADQ) Qualitative -Submitted assignments	2 dieticians 7 educators 3 managers 1 consultant physician 9 withdrew 10 unable to	test) 93.9% reported that they had or would change practice as a result of completing the programme.	Participants were able to identify issues in the acute hospital which could be addressed to improve the experience of people with dementia
Benbow et al. 2011, England	Identification of skills that people with dementia and their carers feel need to be developed in the dementia workforce	Qualitative -written feedback - contemporaneous notes of interviews -interviews	Participants recruited from a Carers Group and a Memory Cafe 11 people living with dementia (interviews n=2) 11 Carers' Group members 47 Memory Café attendees	Thematic analysis Themes -knowledge about dementia -person-centred care -communication -relationships -support and helping people engage in activities	Both people with dementia and their family were able to identify staff who related to them empathetically. Therefore, it is important to ensure relational aspects of care are not replaced by technical and scientific knowledge of dementia
Chenoweth et al. 2014, Australia	Identification of key issues that affect nurses work satisfaction and retention and provide recommendations to improve retention of qualified nurses across dementia care services	Mixed methods -questionnaire -focus groups	Random sample from acute, subacute and community services 3983 nurses completed a set of items derived from four published questionnaires, including: -Nursing Work Index-Revised (49 items) -Stayer's Survey (only section I)	Response rate 39.8%, but representative of the Australian nurse workforce characteristics Workplace issues: care standards, work relations, experienced colleagues, peer collaboration, work schedule Workplace satisfaction: pleasure gained from giving care, receiving a positive patient response, working in effective teams with	Altruism was a primary factor for nurses working in dementia. Retention was supported through nurses feeling valued by their organisation and colleagues, and supported through education, training, supervision, mentoring and remuneration

			<p>-Why do Midwives Stay (all 40 items, 'midwife' was amended to 'nurse')</p> <p>Focus groups: 6 face to face, 4 teleconference (n=58)</p>	<p>dedicated colleagues, feeling empowered through managerial and organisational support</p> <p>Motivation to remain: proud to be a nurse, enjoy the job, way of life, job satisfaction, passion for the job, can make a difference</p> <p>Focus group themes: current issues in caring for people with dementia, factors influencing nurses to remain, organisational approaches and recommendations nurse retention</p>	
Elvish et al. 2014, UK	To report the development and evaluation of a staff training intervention and implementation of "Getting to Know Me" in general hospital	<p>Quantitative repeated measures</p> <p>Pre- and Post-training:</p> <ul style="list-style-type: none"> -Confidence in Dementia Scale (CODE) -Knowledge in Dementia Scale (KIDE) -Controllability by Belief Scale 	<p>Staff on six wards including: complex care, trauma orthopaedic and orthopaedic</p> <p>115 pre- training:</p> <ul style="list-style-type: none"> 41% nurses 15% junior doctors 15% therapists 11% healthcare assistants <p>72 post-training:</p> <ul style="list-style-type: none"> 30% nurses 14% junior doctors 24% therapists 9% healthcare assistants 	<p>CODE</p> <p>Understanding needs of and interacting with people with dementia highly significant improvement ($p<0.001$)</p> <p>KIDE</p> <p>Knowledge significantly higher post training ($p<0.001$)</p> <p>Controllability Belief Scale</p> <p>Significant decrease in scores post training ($p=0.003$)</p>	<p>Borderline change in knowledge, clinical change in a person-centred perspective on challenging behaviour and understanding the needs of and interacting with people with dementia</p> <p>Challenge of implementing a large scale training programme in an acute NHS hospital, attrition rate of 37%</p>

Galvin et al. 2010, USA	Development, implementation, evaluation of a one day dementia training program	<p>Mixed Methods</p> <p>Quantitative repeated measures</p> <p>Time 1: pre-test</p> <p>Time 2: post-test</p> <p>Time 3:120 day post-test</p> <p>Questionnaires:</p> <ul style="list-style-type: none"> -Knowledge about dementia -Confidence in providing dementia care -Practice b <p>Qualitative data:</p> <ul style="list-style-type: none"> -challenges in dementia care -plans to implement changes 	<p>Participants from 4 hospitals:</p> <p>540 participants (mean age 46)</p> <p>90.4% female</p> <p>83% White</p> <p>10% African-American</p> <p>2% Asian</p> <p>2% Hispanic</p> <p>2% non-response</p> <p>Nurses 60%</p> <p>78.6% previous dementia training in last 2 years</p>	<p>Knowledge, confidence, attitude and practice significantly improved at time 2 ($p<0.001$) across all aspects:</p> <ul style="list-style-type: none"> -assess and recognise -manage care -differentiate from delirium -discharge planning -communication <p>Time 3 response rate 14.3% (n=34), results remained stable for 3 out of the 4 hospitals, the fourth hospital knowledge and confidence reduced</p> <p>Challenges included: safety issues, lack of time, behavioural and mood changes, lack of training</p> <p>Plans to implement: involvement of families, improvement in communications</p>	<p>Improvement in knowledge and confidence in caring for patients with dementia following a one day training program.</p> <p>Tentatively results are sustainable at 120 days, however ongoing training and clinical reinforcement required to sustain staff behaviour change</p>
Griffiths et al. 2014, UK	Exploration of healthcare professionals' perceptions of their preparation to care for confused older	<p>Consensual Qualitative Research approach</p> <p>Semi-structured interviews</p>	<p>12 participants from 5 specialities from one large teaching hospital:</p> <p>3 doctors</p> <p>2 senior nurses</p> <p>3 registered nurses</p>	<p>Themes</p> <ul style="list-style-type: none"> -knowledge and skills necessary for the job -interactions with patients and colleagues -effects on staff 	<p>Recommendations for the workforce included a revision of training across healthcare professions pre and post registration and increased specialist support.</p>

	patients on general hospital wards		2 healthcare assistants 1 occupational therapist 1 physiotherapist Total 60 participants		
Innes et al. 2016, UK	Exploration of experiences, attitudes and knowledge of staff and patients with dementia to inform physical and practice environment changes	Mixed methods Repeated measures T1 – pre-test T2 – post-test -Environment Audit Tool -Dementia Care mapping -Person-centred Care Assessment Tool (PCAT)	Participants from two hospitals (n=69) Patients with dementia (n=16, male n=5, female n=11)	Environmental Audit Tool – improvement from T1 to T2 was demonstrated Dementia Care Mapping – improvements were observed between T1 and T2, however some areas remained unchanged The staff responses on the PCAT were inconsistent with the results of the Environment Audit tool and Dementia Care Mapping	The differences between staff perceptions of their provision of person-centred care the results of two different observation tools allowed for the multiple perspectives within a complex acute hospital environment All data was integrated to support the feedback to staff and management for recommendations to improve person-centred care
Page and Hope 2013, UK	Explore perceived knowledge and competency of specialist dementia care nurses who would be expected to possess higher	Quantitative survey Online assessment of: -knowledge and skills -unmet training needs	40 dementia specialist nurses from across the UK attending a National Dementia Conference 85% over 41 years of age 57.5% had been qualified nurses for over 20 years 69.2% had specialised in dementia care for over 10	Nurses identified their limitations: -lacked expert knowledge of legal and ethical aspects -lacked understanding human rights in dementia care Nurses identified their strengths: - knowledge and competent in assessment and interventions -moderately high levels of	Nurses unmet educational needs of legal, ethical issues and human rights as well as biomedical nature of dementia need to be addressed before this expert group of nurses can achieve their full potential and adapt to

	levels of knowledge and skills		years	proficiency in psychosocial aspects of dementia care, but from experience not training	new models of care
Palmer et al. 2014, USA	To evaluate the Dementia Friendly Hospital Initiative (DFHI) program (phase 3) for broader distribution as an evidence-based education program	Quantitative repeated measures Time 1: pre Time 2: post Time 3: 3 months post Questions explored concepts of dementia care: -attitudes and practices -confidence -knowledge	355 participants working from one of five hospitals completed the DFHI one day training program 62.3% nurses 2.8% social workers 3.9% pastoral care 7.3% nursing assistant 5.6% physiotherapists 5.9% occupational therapists 0.2% Physician 0.2% speech and language therapist 10.4% other	Completed questionnaires: Pre training 355 Post training 325 3 months post training 88 Total of 3 measures demonstrated statistically significant improvements following the DFHI ($p < 0.001$ ANOVA)	The DFHI impacted on attitudes, practices, confidence and knowledge relating to dementia care. Important elements were the interdisciplinary case study discussions. A relatively inexpensive educational program that can impact on staff to support improvements in dementia care.
Smythe et al. 2014, UK	To evaluate a brief psychosocial training intervention (BPTI) compared to standard teaching for staff caring for patients with dementia in an	Mixed methods Pre and Post interviews and questionnaires: -Inventory of Geriatric Nurse Self-Efficacy -Approaches to Dementia Questionnaire -Maslach	Standard teaching on dementia (n=86) BPTI intervention (n=30) Completed: -questionnaires (n=81) -interviews (n=15) No information available on role of staff participating	No significant difference was found between groups receiving standard teaching or BPTI. Interviews of staff from both groups suggested an increased awareness of the needs of people with dementia, more knowledge and practical skills from the BPTI participants, alongside increased tolerance, understanding and confidence, but this was not	BPTI involved training in the clinical environment and was planned to involve groups of 5 participants, but occurred on an individual level which removed possible benefits of role modelling and peer support.

	acute hospital setting	Burnout Inventory -Alzheimer's Disease Knowledge Scale		reflected in the quantitative data.	
Surr et al. 2016	To assess the effectiveness of a bespoke training programme in person-centred dementia care for acute hospital staff	<p>Quantitative Repeated measures</p> <p>Time 1: pre Time 2: -foundation 4-6 weeks post Time 3: -intermediate 3-4 months post</p> <p>Validated measures: -Approaches to Dementia Questionnaire (ADQ) -Staff Experience of Working with Demented Residents Scale (SEWDR) -Caring Efficacy</p>	<p>41 staff from an Acute NHS Trust</p> <p>90% were nurses 39% had worked in the acute hospital setting for more than 20 years 46.3% had no prior dementia training</p>	<p>Analysis repeated measures ANOVA were completed for each measure, with post hoc pairwise comparisons of differences between means</p> <p>ADQ -significant difference in staff attitudes towards people with dementia, which was lower at T1 than T2 ($p=.002$), T1 and T3 ($p<.001$), and T2 and T3 ($p<.001$) -significant difference in hope for people with dementia between T1 and T2 ($p=.000$), T1 and T3 ($p=.000$) -no significant difference in personhood subscale between T1 and T2 ($p=.10$), but a significant difference between T1 and T3 ($p<.001$)</p> <p>SEWDR -significant differences in staff experience between T1 and T2</p>	<p>Foundation and intermediate levels of training improved staff attitudes towards people with dementia, including a positive change in the sense of hope for people living with dementia</p> <p>Foundation level training was sufficient to support a change in staff attitudes towards people with dementia and a sense of hope for people living with dementia</p> <p>Greater depth of knowledge was required through the completion of intermediate level training to facilitate changes in personhood (ability to see the people</p>

		Scale (CES)		<p>($p < .001$), T2 and T3 ($p < .001$), and T1 and T3 ($p < .001$)</p> <p>CES</p> <p>-no significant difference T1 and T2 ($p = .21$), but a significant difference between T1 and T3 ($p < .001$)</p>	<p>living with dementia as persons), caring efficacy, and satisfaction in working with people with dementia</p>
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