

BMJ Open Interprofessional education in the care of people diagnosed with dementia and their carers: a systematic review

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ABSTRACT

Objectives: This systematic review is linked to the multifaceted social, economic and personal challenges of dementia and the international recognition of the value of interprofessional education (IPE) and its influence on health and social care outcomes. This review therefore aimed to identify, describe and evaluate the impact of IPE interventions on health and social care practitioners (prequalification and postqualification) understanding of dementia, the quality of care for people with dementia and support for their carers.

Methods: Following PRISMA guidelines, 9 databases were searched (MEDLINE, EMBASE, The Cochrane Library, PsycINFO, CINAHL Plus, Applied Social Sciences Index and Abstracts, Healthcare Management Information Consortium, ERIC and British Education Index). Narrative analysis of the findings was undertaken.

Design: Systematic review.

Results: 6 studies meeting the inclusion criteria were identified. The majority of studies were conducted in North America. Participants in 4 studies were health and social care practitioners caring for people with dementia, whereas the remaining studies focused on training graduate or undergraduate students. Diverse IPE activities with varying content, delivery mode and duration were reported. Although some studies reported more positive attitudes to interprofessional working as a result of the interventions, none reported benefits to patients or carers. The quality of the included studies varied. Overall, the evidence for the reported outcomes was considered weak.

Conclusions: This review identified 6 studies describing IPE interventions intended to improve collaborative knowledge, skills, interprofessional practice and organisational awareness of dementia and dementia care. The small number of studies, their varied nature, scope and settings combined with poor quality of evidence limits our understanding of the effectiveness of IPE on the care and support of people with dementia and their carers. Further research is required to develop the evidence base and provide robust studies to inform IPE development.

Trial registration number: CRD42014015075.

Strengths and limitations of this study

- The methods were rigorous and based on the Preferred Reporting Items for Systematic review and Meta-analysis Protocols (PRISMA-P) 2015 statement and on prospective registered protocol that was followed thorough.
- Strengths of this review include its extensive and systematic search of various databases, its screening and data collection process conducted independently by two authors and the use of the GRADE approach to assess confidence in estimates of effect.
- The results of this systematic review are likely to be influenced by language, search and selection bias.
- We identified only six studies, and the overall quality of evidence for each investigated outcome was low to very low, hence we could not draw strong conclusions.

INTRODUCTION

Dementia is a syndrome with symptoms that include changes in memory capacity, personality and behaviour.¹ These symptoms, to varying degrees, may result in a decline in autonomy and impact on an individual's agency for independent living.² The current worldwide estimate of people affected by dementia is in excess of 35 million and rising,³ and dementia is now widely acknowledged as a significant public health issue.^{4 5}

Although not exclusively, dementia is primarily age related with a standardised prevalence occurring at 60 years of age.⁶ This has great significance given that the world's population aged 60 and above will reach 1.25 billion by 2050.⁷ While such age-related epidemiological projections are challenging,⁸ the economic and societal costs of dementia that are likely to increase year on year⁹ remain unquestionable.

Residential care is often necessary in late-stage dementia when patients may suffer from continence problems, immobility when

they are bedridden or behavioural problems.¹⁰ However, in most cases, the burden of caring for patients with dementia rests with the informal caregivers, for example, family and friends.^{11–13} In the USA, for example, carers provide ~80% of the care for people with Alzheimer's disease and other dementias.¹⁴ It is therefore essential that carers are supported in the vital role they play. Although many developed countries have support programmes for carers, being a carer of someone with dementia is still challenging and often detrimental to carers' own health and well-being.^{15 16} Therefore, governments are focusing their finite resources on public health initiatives to reduce the risk factors, early detection and appropriate care and support for people with dementia and their carers. In line with this, a key recommendation of the World Alzheimer Report (2015) is to develop the dementia care workforce. The report advises government policy, and subsequently the providers of care should ensure that the dementia care workforces are adequately trained to provide person-centred care.¹⁵ A means of taking this agenda forward is through the development of integrated care pathways and support mechanisms, which in turn are facilitated by interprofessional collaboration.¹⁶ However, working together in an effective interprofessional manner is often undermined by a lack of understanding of the nature and scope of responsibility among healthcare professionals.^{17 18}

Interprofessional education (IPE) has long been regarded the cornerstone to the provision of the knowledge and skills necessary to deliver collaborative practice.^{19–21} Definitions of IPE vary but for the purposes of this review it is defined as two or more professions learning with and from each other.²² Such learning is enacted across academic and work-based settings embedded in prequalification and postqualification education/training. Earlier literature reviews focusing on a number of health conditions have indicated that this form of education can be effective in providing learners with a range of abilities to collaborate in the delivery of care across various clinical settings.^{19 23 24} However, to date, no reviews, which provide a specific focus on reporting the effects of IPE on the care of people diagnosed with dementia and their carers, have been undertaken.

This review therefore aimed to identify, describe and evaluate the impact of IPE interventions in dementia care. The review was based on the following specific questions:

1. What is the evidence that IPE for providers involved in dementia care has benefits for: (a) patient (health) outcomes, (b) family carer outcomes, (c) provider (including students) education and (d) organisational and delivery of dementia care?
2. Does the implementation of IPE improve collaborative knowledge, skills and interprofessional practice?
3. What are the outcomes of IPE in dementia care?

METHODS

We applied a pre-existing systematic review protocol to search for studies that described the evidence for the reported effects of IPE on collaborative knowledge and skills for staff involved in the delivery of dementia care.²⁵ Article inclusion and data analysis followed PRISMA guidelines,^{26 27} and the protocol was registered with PROSPERO the international prospective register of systematic reviews at the Centre for Reviews and Dissemination, University of York; registration number CRD42014015075.

Search strategy

The search strategy included a systematic search of electronic databases, supplemented by hand searching relevant journals and reference checking of included articles. A MEDLINE search strategy was developed, which was adjusted to run on another eight databases (EMBASE, The Cochrane Library, PsycINFO, CINAHL Plus, Applied Social Sciences Index and Abstracts (ASSIA), Healthcare Management Information Consortium, ERIC and British Education Index). The results of the electronic database searches were limited to the past 10 years (from 2004 to 2014) and to articles written in English. The search strategy was performed from 9 September 2014 and updated on 3 August 2015. For detailed search strategies, see online supplementary additional file 1.

Additional studies were identified by:

- ▶ Manual searching of three journals with a considerable number of published papers on IPE and dementia (January 2004 to December 2014; *Journal of Interprofessional Care*, *International Psychogeriatrics*, *Dementia: The International Journal of Social Research and Practice*);
- ▶ Checking the reference lists of key articles (ie, included studies; pertinent studies);
- ▶ Consulting corresponding authors of key studies to identify any other relevant articles.

Inclusion/exclusion criteria

Research articles were included if they (a) focused on health and social care students and/or providers in dementia care, (b) evaluated the outcomes of IPE interventions (eg, classroom-based, practice-based, simulation and/or online IPE activities) either delivered alone or in combination with other interventions and (c) reported study results using quantitative, qualitative or mixed methods designs. In addition, articles were included if they primarily reported educational and/or organisational outcomes for professionals or if they focused on any reported changes in outcomes for people with dementia or their carers. Articles were excluded if they (a) did not involve people with dementia, (b) did not evaluate an IPE intervention and (c) did not report empirical findings. Systematic reviews, commentaries, non-peer-review articles and unpublished literature were excluded from the review.

Data extraction and quality appraisal

All duplicate citations were removed before two members of the review team independently reviewed the titles and abstracts for possible inclusion. Full-paper articles of any relevant titles/abstracts were obtained and again reviewed independently by two reviewers. Any discrepancies between reviewers over selection were resolved by a third reviewer.

For each included study, two reviewers independently extracted the following data using a standardised data extraction form:

1. General information (eg, study objectives, research design and data collected);
2. IPE intervention information (eg, participant profession, type of IPE activities provided);
3. Reported outcomes (study findings);
4. Quality of study information (assessment of methodological quality).

Research study quality was evaluated using the quality checklist for quantitative or qualitative studies developed by Kmet *et al* (2004).²⁸ Additionally, the criteria recommended by the GRADE Working Group to assess the strength of the body of evidence across particular study outcomes were employed.^{28 29} Evidence for each reported outcome was graded as: (I) high, (II) moderate, (III) low or (IV) very low according to the GRADE rating system. This process was also undertaken independently by two reviewers, with any disagreements resolved through discussion with a third reviewer.

Data synthesis strategy

A meta-analysis of results was not appropriate because of the heterogeneity of types of study and outcomes measured. Therefore, a narrative synthesis was undertaken to integrate findings from the included studies reporting the nature of the IPE intervention and quality of the included studies. Included studies were grouped into the outcome type using a modified Kirkpatrick's model²⁰ to classify IPE outcomes (see [table 1](#)).

RESULTS

The flow chart representing study selection, including reasons for exclusion, is summarised in [figure 1](#). The included studies underwent methodological quality assessment.³⁰ The studies that met the inclusion criteria numbered six.^{31–36}

Intervention characteristics

The included studies involved a range of different types of IPE activities, undertaken in different settings, with different participants and involved varying content, delivery mode and duration. Three of the included studies were conducted in the USA;^{32 34 36} one was undertaken in Australia,³¹ one in Canada³³ and one in the UK³⁵ ([table 2](#)). Participants in three studies included providers of health and social care caring for people with dementia,^{32 33 35} whereas three studies focused on graduate/undergraduate students receiving dementia care training.^{31 34 36}

Three studies involved practice-based IPE interventions: one was delivered in primary care;³³ one in a community setting³⁴ and one in an acute trust.³⁵ Two studies focused on a classroom-based IPE interventions delivered in a university,^{31 36} whereas another was implemented across three sites (a teaching hospital and two managed care systems) and was classroom and practice-based.³²

In terms of specific details regarding each of the included studies, Cartwright *et al*'s³¹ study used mixed methods to investigate whether participation in an online IPE dementia case study would improve students' attitudes and self-perceived ability in working with others to care for people with dementia. Coogler *et al*³² employed a before–after design and assessed the impact of a geriatric interprofessional team training programme on changes in team skills and attitudes about team working for the care of people with dementia.

Lee *et al*³³ assessed the effectiveness of a training programme aimed at improving detection and management

Table 1 Outcomes from interprofessional education (IPE)

Level 1 Reaction	Learners' views on the learning experience, its interprofessional nature, and its organisation, presentation, content, teaching methods and aspects of the institutional organisation, for example, time-tabling, materials, quality of teaching.
Level 2a Modification of perceptions and attitudes	Changes in reciprocal attitudes or perceptions between participant groups towards people with dementia, their care and treatment.
Level 2b Acquisition of knowledge and skills	Includes knowledge and skills linked to interprofessional collaboration. Examples include the acquisition of concepts, procedures and principles of interprofessional collaboration.
Level 3 Behavioural change	Identifies individuals' transfer of interprofessional learning to their practice setting and their changed professional practice (eg, support for change of behaviour in the workplace).
Level 4a Change in organisational practice	Wider changes in the organisation and delivery of care (eg, interprofessional collaboration and communication, teamwork and co-operative practice, costs to the health and/or social care service).
Level 4b Benefits to patients/clients	Improvements in health or well-being of patients/carers (eg, health status, disease severity measures, progression of the disease, patient or family carers' satisfaction, quality of life).

Adapted from Hammick *et al* (2007).²¹

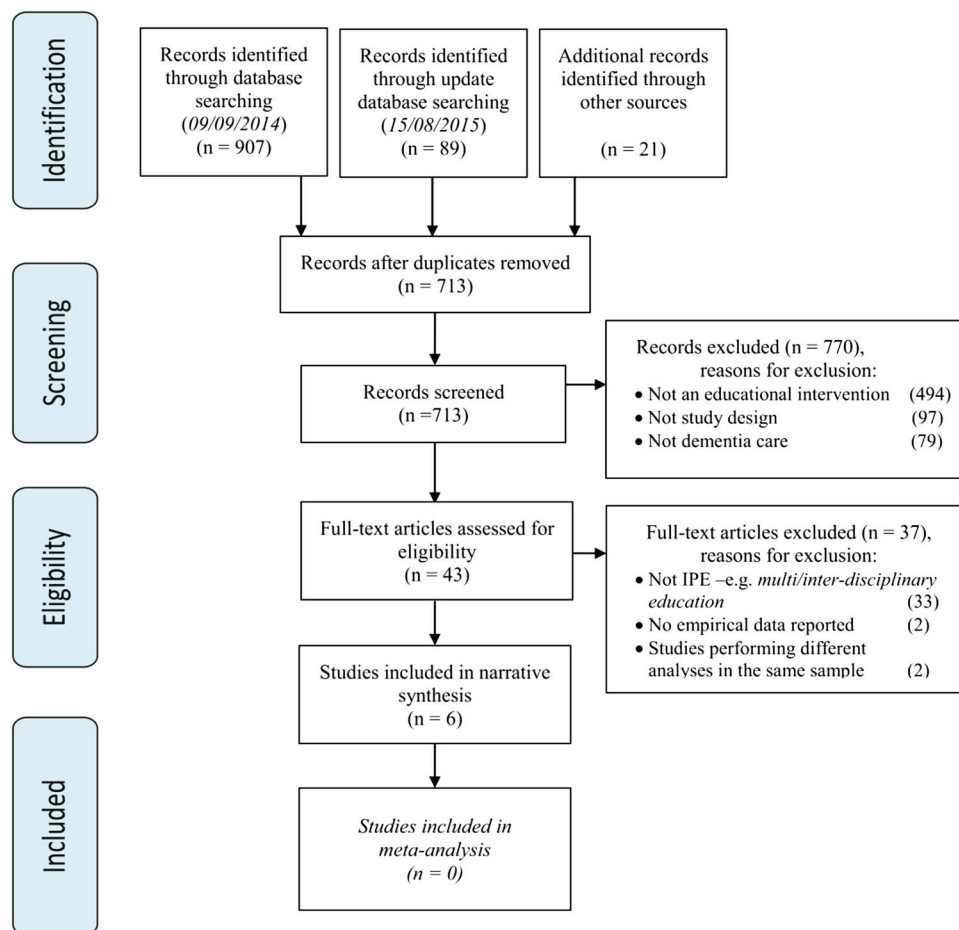


Figure 1 Selection of articles for review. IPE, interprofessional education.

of dementia by the development of a self-sustaining memory clinic-based intervention. This programme also assisted family health teams to develop collaborative knowledge and skills. The IPE intervention lasted 5 days and consisted of an interactive workshop to increase team knowledge and skills related to assessment and management of memory problems, followed by a 3-day mentorship programme.

McCaffrey *et al.*³⁴ in a study conducted in a centre for diagnosis, support and education for people with dementia and their carers, examined whether IPE could enhance medical and family nurse practitioner students' basic competency in the detection and management of Alzheimer's disease and other dementias. The IPE intervention focused on changing knowledge and skills linked to interprofessional collaboration about dementia care (within a training course).

Teodorczuk *et al.*³⁵ examined whether implementing an IPE programme could increase staff confidence in dealing with people with dementia or delirium and could thereby improve staff practice. The IPE intervention focused on three main innovative features: using an interprofessional teaching approach, learning directly from patients and carers and action learning.

Zuccherro *et al.*³⁶ evaluated the effects of a 1-day symposium to facilitate healthcare students 'interdisciplinary

care' for older adults with dementia. The IPE was delivered by use of a symposium during which all students reviewed common materials about team working and dementia care and a seminar aimed at facilitating teamwork.

Methodological information

Figure 2 summarises the methodological details of the included studies. Five of the studies employed quantitative approaches, whereas one study³¹ used mixed methods. Most studies employed a before-and-after design with only one³⁴ using a controlled study design. In contrast, Cartwright *et al.*³¹ study employed a case study design. The studies were of variable methodological quality, ranging in overall score from 41%³⁵ to 86%.³⁶ All but two studies^{32 33} clearly reported their research approach for evaluating the IPE learning activities. The aim of the research was clearly and well defined in all studies.

Across the included papers, conclusions were supported by the findings. Furthermore, most of the studies reported sufficient details of the results and methodological limitations—the exception was Teodorczuk *et al.*'s³⁵ study, where this information was considered poor. As shown in figure 2, an important methodological flaw in the studies was the absence of information to

Table 2 Characteristics of the articles included in the review

Study Location	Methods	Aim	(A) Mode of delivery (B) Duration	Setting	Beneficiaries	Participating health professionals (n)	Outcomes type*
31 Australia	Online case study design without a comparison group. Mixed methods were used to assess students' learning outcomes using an interprofessional scale completed pre and post the case study and thematic analysis of free text responses	To investigate whether an IPE dementia case study would increase student comfort, self-perceived ability and value in working with others to meet the needs of patients with dementia	(A) Internet-based learning management system that provided the student participants with an online IPE dementia case study (B) 4 weeks	University	Students training in dementia care	<ul style="list-style-type: none"> ▶ Speech ▶ Pathology (48) ▶ Social work (24) ▶ Occupational therapy (9) ▶ Nursing (9) ▶ Health information (4) ▶ Not reported (31) Total (125)	2a
32 USA	Preintervention/postintervention design without a comparison group. Baseline and postintervention data measured using a questionnaire including: (1) demographic and motivational questions; (2) the ATHCTS and (3) the Geriatrics Attitudes Scale	Training on how teams can provide well-coordinated best-practice care by reducing medical errors and decreasing service duplication	(A) 39 different half-day training sessions delivered in three healthcare systems (B) 156 hours	1. Teaching hospital 2. Managed care organisations	Professionals delivering dementia care	<ul style="list-style-type: none"> ▶ Nursing (34) ▶ Social work (9) ▶ Rehabilitation (10) ▶ Other (8) Total (61)	2a 2b
33 Canada	Preintervention/postintervention design without a comparison group. Baseline and postintervention data measured using: (1) an online survey and (2) a paper-based survey	To improve detection and management of dementia through the development of a self-sustaining primary care based memory clinic	(A) 2 day workshop to increase team knowledge and skills followed by 3 day mentorship programme (including 1 day observation) (B) 5 days	Primary care (22 FHTs) The workshop was led by members of the host institution—Memory clinic	Professionals delivering dementia care	<ul style="list-style-type: none"> ▶ Medicine (40) ▶ Nursing (47) ▶ Social work (13) ▶ Alzheimer's Society representatives (9) ▶ Pharmacy (7) ▶ Other (8) Total (124)	1 2b 3 4a
34 USA	Preintervention/postintervention design with a comparison group. Baseline and postintervention data measured using (1) investigator-created semantic differential scale items on attitudes and true-false test on knowledge towards individuals with AD and (2) the ATHCTS	To use an interprofessional approach to increase students' understanding of the roles they and other professionals play	(A) 4 hour session+5 clinical 'experiences' in dyads (nurse and medical students) observing a nurse. (B) Each dyad participated in five clinical experiences over a 15-week semester	Memory and wellness centre	Students training in dementia care	<ul style="list-style-type: none"> ▶ Medicine (74) ▶ Nursing (46) Total (120)	2a 2b

Continued

Table 2 Continued

Study Location	Methods	Aim	(A) Mode of delivery (B) Duration	Setting	Beneficiaries	Participating health professionals (n)	Outcomes type*
35 UK	Preintervention/ postintervention design without a comparison group. Baseline and postintervention data measured using a questionnaire based on a five-point Likert scale	To improve staff practice	(A) 2-day course Day 1: challenged beliefs and about the confused older patient Day 2: focused on managing complex cases and practice change (B) 3 times over 18 months	Acute trust	Professionals delivering dementia care	<ul style="list-style-type: none"> ▶ Nursing (15) ▶ HealthcareAssistant (8) ▶ Physiotherapy (5) ▶ Modern matron (5) ▶ Medicine (3) ▶ Physiotherapy (3) ▶ Other (9) Total (48)	2b
36 USA	Preintervention/ postintervention design without a comparison group. Baseline and postintervention data measured using the ATHCTS	To evaluate the interdisciplinary approach to treating older adults with dementia	(A) Symposium: 1, (pre) all students reviewed a common article about interdisciplinary team process, discipline-specific readings and an assigned case study. 2, (during) (a) didactic lecture about dementia care; (b) interprofessional team meetings; (c) large group feedback session; (B) A one day 5 hour symposium	University	Graduate and undergraduate students training in dementia care	<ul style="list-style-type: none"> ▶ Nursing (36) ▶ Administration (27) ▶ Occupational therapy (26) ▶ Counselling (8) ▶ Social work (6) ▶ Psychology (6) Total (109)	2a

*Kirkpatrick level.

AcD, academic detailing; AD, Alzheimer's disease; ATHCTS, Attitudes Toward Healthcare Teams Scale; FHT, family health centre; ITT, interdisciplinary team training.

Figure 2 Methodological quality for included studies.^{31–36}

Quality items							Study			
	2	3	4	5	6	1	ID.	Authors	Design	Overall quality score
1- Question / objective sufficiently described?	2	3	4	5	6	1				
2- Study design evident and appropriate?	3	4	6	2	5	1				
3- Method of subject/comparison group selection or source of information/input variables described and appropriate?	2	3	4	6	5	1				
4- Subject (and comparison group, if applicable) characteristics sufficiently described?	2	4	6	1	3	5				
5- If interventional and random allocation was possible, was it described?	1	2	3	4	5	6	1	Cameron <i>et al.</i> 2010	Case series	50%
6- If interventional and blinding of investigators was possible, was it reported?	1	2	3	4	5	6	2	Coogle <i>et al.</i> 2005	Before/After	68%
7- If interventional and blinding of subjects was possible, was it reported?	1	2	3	4	5	6	3	Lee <i>et al.</i> 2013	Before/After	64%
8- Outcome and (if applicable) exposure measure(s) well defined and robust to measurement bias?	2	6	3	4	5	1	4	McCaffrey <i>et al.</i> 2013	Controlled before/after	64%
9- Sample size appropriate?	2	3	4	5	6	1	5	Teodorczuk <i>et al.</i> 2014	Before/After	41%
10- Analytic methods described/justified and appropriate?	3	4	6	2	5	1	6	Zuccherro <i>et al.</i> 2011	Before/After	82%
11- Some estimate of variance is reported for the main results?	2	6	3	4	5	1				
12- Controlled for confounding?	6	2	3	4	5	1				
13- Results reported in sufficient detail?	2	3	4	6	1	5				
14- Conclusions supported by the results?	1	2	3	4	5	6				

■ yes ■ partially ■ no □ n/a

evaluate sample size adequacy. Failure to adjust the analysis for confounding variables and not providing information about uncertainty of estimates in reporting the main results were also two main limitations.

Reported outcomes

Four IPE interventions focused on changing reciprocal attitudes among health providers towards dementia care and treatment—level 2a outcomes.^{31 32 34 36} Four of the studies reported outcomes related to acquisition of collaborative knowledge and skills linked to interprofessional collaboration in caring for people with dementia—level 2a.^{32–35} Only one study³³ investigated changes in reaction, behavioural change and organisational practice—levels 1, 3 and 4a. None of the studies assessed outcomes related to patients and/or carers—level 4b of the Kirkpatrick model.

Table 3 provides a summary of the learning outcomes classified using a modified Kirkpatrick model as described above (see table 1) and the overall quality of the evidence per outcome as assessed with GRADE.

This section goes on to provide more details about the outcomes of the included studies and the methodological quality:

Reaction (level 1)

Only one study³³ reported the learners' views of their experience of learning. These authors found that the use of interprofessional case study discussions and formal presentations resulted in improved learner perceptions. Given the nature of the methodological quality of the studies in this category, the evidence was rated as 'very low'.

Modification and perceptions of attitude (level 2a)

The four studies that focused on this category of learning outcome showed that the use of IPE is likely to facilitate a better attitude about other professionals' role in the delivery of dementia care.^{31 32 34 35} Overall, the evidence provided by these studies was rated as 'low'.

Acquisition of knowledge and skills (level 2b)

The four studies investigating outcomes relating to acquisition of knowledge/skills found that the use of an IPE approach in providers delivering dementia care may lead to improved team skills, collaborative knowledge and ability to manage cognitive impairments and dementia care.^{32–35} Given the high risk of bias of this research, the evidence supporting the positive effects of IPE was rated as 'low'.

Behavioural change (level 3)

Only one study³³ described changes in practice as a result of interprofessional learning. The reported change was greater use of standardised patient assessment tools (the assessment for cognitive impairment and fitness to drive). There was also an increased use of a clinical reasoning model by participants in their work. However, the evidence to support the transfer of learning into practice was graded of 'low' quality.

Changes in organisational practice (level 4a)

Lee *et al.*'s study reported wider organisational changes that impacted on the delivery of dementia care, as a result of its IPE intervention. The changes comprised establishing a memory clinic in the primary care setting.³³ However, the effects were uncertain because the quality of the evidence was 'very low'.

DISCUSSION

This systematic review investigated the evidence of the reported effects of IPE on collaborative knowledge and skills, interprofessional practice and the delivery of dementia care. As presented above, the review identified six relevant IPE studies, which in terms of their methodological quality were generally weak. As a result, the evidence for the use of IPE in dementia care suggests that its effects are uncertain for outcome levels 1–4a, with no evidence for level 4b—effects of IPE in dementia care on patient or family carers' outcomes.

Indeed, the strength of this body of evidence for IPE in the care for people with dementia was assessed to be either 'low' or 'very low'. Specifically, we found low-

**Table 3** Summary of learning outcomes

Outcomes*	Main findings (as reported by the authors)	Study	Quality of the evidence*
Level 1	<ul style="list-style-type: none"> ▶ “There were no statistically significant differences.” page 27 ▶ “Mean ratings of participants’ perceptions were highest for case study discussions and formal presentations, and lowest, but still high, for multimedia presentations.” page 27 ▶ “Participants’ ratings of the usefulness of the mentorship component of the program reflected that mentorship opportunities were extremely useful for knowledge transfer.” page 28 	33	Very low quality
Level 2a	<ul style="list-style-type: none"> ▶ “Students had an increased appreciation of the importance of teamwork and client-centred care when working with people with dementia and complex health-care needs.” ▶ “Furthermore, the qualitative results supported an increase in interprofessional socialisation and values, which foster collaborative teamwork.” page 92 ▶ “Results suggest that individuals who have worked longer in the health care system are more likely to perceive the value of teams in the pursuit of quality care and to develop improved attitudes about geriatric care as a consequence of educational interventions.” page 155 ▶ “Improved attitudes toward interprofessional teamwork and collaboration were evident in trainees’ responses to open-ended questions about the experience.” page 536 ▶ “Student attitudes toward health care teams were more positive after the symposium.” page 405 	31 32 34 36	Low quality
Level 2b	<ul style="list-style-type: none"> ▶ “Results ... demonstrate that more than 4 hours of training are required to demonstrate self-reported improvements in team skills and attitudes about the costs of team care.” page 152 ▶ “There were statistically significant increases in self-reported knowledge of and ability to assess and manage cognitive impairment, confidence, comfort level in speaking to patients and caregivers about memory problems and the ability of participants’ FHT to manage cognitive impairment independently.” page 28 ▶ “Significant outcomes of this program included increased knowledge about AD on the multiple choice test in the nurse practitioner students.” page 535 ▶ “There has been a significant improvement in the learners’ confidence in managing issues relevant to this patient group...” “The course evaluation and posters also suggested positive changes in knowledge and attitude.” page 499 	32 33 34 35	Low quality
Level 3	<ul style="list-style-type: none"> ▶ “There were no statistically significant differences...” page 27 “Practice changes were reported more frequently for use of standardised tools for assessing cognitive impairment and executive functioning, screening for fitness to drive and use of a clinical reasoning model.” page 28 	33	Very low quality
Level 4a	<ul style="list-style-type: none"> ▶ “All but 1 of the participating FHTs (number=23) established a memory clinic within their primary care setting that was sustainable over time.” page 28 	33	Very low quality
Level 4b	–	–	–

High quality: Further research is very unlikely to change our confidence in the estimate of effect. Moderate: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate. Low: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate. Very low quality: any estimate of effect is very uncertain.

*GRADE Working Group rating system.^{28 29}

AcD, academic detailing; AD, Alzheimer’s disease; ATHCTS, Attitudes Toward Healthcare Teams Scale; FHT, family health centre; ITT, interdisciplinary team training.

quality evidence, suggesting that the implementation of IPE improves collaborative knowledge, skills and inter-professional practice in health and social care providers and students involved in caring for people with dementia.^{30 31 33–35} We also found ‘low’ quality evidence, suggesting that IPE may improve the reciprocal attitudes between participant groups towards people with dementia, their care and treatment.

To the best of our knowledge, this is the first systematic review summarising the evidence for the value of

IPE dementia education programmes on learning outcomes of health and social care providers and students. Accordingly, the findings cannot be compared with other studies. However, parallels may be drawn with findings from this review and with the results of previous reviews, which have also found limited evidence that IPE can improve professional practice and health and social care outcomes, for example, in child protection, delirium care, diabetes care and domestic violence management.^{21 37}

Strengths and weaknesses of the review

Strengths of this review include prospective protocol registration with PROSPERO,²⁵ which was followed thoroughly. The review methods were also based on the Preferred Reporting Items for Systematic review and Meta-analysis Protocols (PRISMA-P) 2015 statement,³⁸ a rigorous system for undertaking systematic reviews. The results in this review are therefore likely to provide a comprehensive review of how IPE is being used in dementia care—comparable with other IPE systematic work.

This systematic review also has a number of limitations. First, it was limited to studies published in English, and therefore the findings may be affected from the so-called ‘language bias’.^{39–40} Second, the literature on IPE in dementia care was limited and heterogeneous; therefore, search and selection bias may be occurred.⁴¹ Third, to provide a current state of evidence, only studies published in the past 10 years were included in this review, and thus our results may be biased in terms of ‘time-lag bias’.

Implications for practice and future research

This review identified only six studies that described IPE interventions whose aim was to improve collaborative knowledge, skills, interprofessional practice and organisational awareness of dementia and dementia care. However, the evidence was generally weak due to limitations such as self-selection bias and the use of small convenience samples. In addition, most of the included studies used weak research designs that were unable to differentiate between direct effects of the IPE intervention (such as acquisition of knowledge and skills) versus the added value of contextual constraints and opportunities (such as requirements for professional registration, funding, tutors’ expertise and participants’ prior learning and beliefs). Nevertheless, these findings can inform a future agenda for research focused on developing higher quality IPE studies for professionals working in the delivery of care for people with dementia.

CONCLUSIONS

The world’s ageing population and the associated rise in the number of people with dementia is of international concern. The impact of this significant public health issue extends across the social, economic and political domains of society. On a personal level, it may affect an individual’s agency for independent living and have a negative impact on those caring for family members with dementia. The World Alzheimer Report (2013) recommended that health and social care professionals are adequately trained in order to provide person-centred care for those with dementia and those who support them.⁴² IPE providing professionals with effective evidence-based tools to identify what they could bring to the management of dementia collectively offers a possible way to improve interprofessional collaboration and care for those with dementia and their families.

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Competing interests None declared.

Provenance and peer review Not commissioned; externally peer reviewed.

Data sharing statement Data are not shared but may be found in the six studies critically reviewed as part of this review. No additional unpublished data are available for this study.

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