Overview of systematic reviews: Effective Home Support in Dementia Care, components and impacts – Stage 1, psychosocial interventions for dementia

Running head: Systematic reviews for psychosocial interventions in dementia

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Abstract

Aim. To synthesise evidence to identify the components of effective psychosocial interventions in dementia care to inform clinical practice, policy and research.

Background. With population ageing dementia represents a significant care challenge with 60% of people with dementia living at home.

Design. Overview of systematic reviews with narrative summary.
**Data sources.** Electronic searches of published systematic reviews in English using Cochrane Database of Systematic Reviews, DARE, EPPI-Centre, between September 2013 - April 2014.

**Review methods.** Systematic reviews were appraised against Cochrane Collaboration levels of effectiveness. Components of psychosocial interventions were identified with their theoretical rationale. Findings were explored with a Patient, Public and Carer Involvement group.

**Results.** 36 systematic reviews were included. From interventions, 14 components were identified, nine for people with dementia and five for carers, mostly undertaken in nursing/care homes. For people with dementia, there was evidence of effectiveness for cognitive stimulation and cognitive training; but less evidence for sensory stimulation, reminiscence, staff education, behavioural therapy and ADL training. For carers, there was evidence of effectiveness for education and training, psychotherapy and counselling.

**Conclusion.** There was a lack of definitive evidence of effectiveness for most psychosocial interventions. Further studies with stronger methodology or replication of existing studies would strengthen the evidence base. Few interventions were undertaken with people with dementia and their carers living at home. Further work will investigate the extent to which components identified here are present in models of home support for people with dementia and carers and their effectiveness.
**Summary statement**

**Why is this research or review needed?**

- There is no cure for dementia currently and as people live longer the costs associated with its management will increase.
- Previous reviews are characterised by a lack of detailed information examining the application of multicomponent interventions for people with dementia and their carers.
- Little is known about the components of psychosocial interventions in dementia care and their relative effectiveness for service users and carers.

**What are the key findings?**

- Multiple components of care for both older people and their carers were identified, which were provided in a multiplicity of settings.
- This overview confirms that there was insufficient evidence of effectiveness for psychosocial interventions for people with dementia and their carers in the home setting.

**How should the findings be used to influence policy/practice/research/education?**

- This review informs the identification of different models of support for people with dementia and their carers provided at home in a subsequent literature review.
Clinical practice and service commissioning will be informed by the evidence from this review relating to the components of effective support for people with dementia and their carers.

Introduction

With population ageing dementia represents a significant public health and care challenge (Ferri et al. 2005). Dementia is a progressive disorder which leaves individuals less able to care for themselves, more prone to emotional and behavioural problems and more likely to have poor physical health (MacKnight & Rockwood 2001, Burns et al. 2005). Globally, it is a major cause of disability and high cost care in older people (Alzheimer’s Disease International 2015). In the United Kingdom (UK), finding cost-effective ways to improve the care of people with dementia and their families has been termed the £20 billion question (House of Commons All-Party Parliamentary Group on Dementia 2011).

In England, about 60 per cent of people with dementia live in private households. Helping them to ‘live well’ (Department of Health 2009) necessitates establishing appropriate and effective forms of home or personal support. This includes specialist care to facilitate and augment existing coping skills of people with dementia and their informal carers (National Audit Office 2007). Many people can experience a good life in a care home or equivalent, but most prefer home life for its quality, self-determination and economy (Challis et al. 2002). Optimising support for people with dementia in their own homes has been prioritised (Department of Health 2009). Thus, investment in approaches that maintain life at home (avoiding nursing/care home admission) is required. Several reviews of psychosocial
interventions for dementia, from various settings, have examined effectiveness but little information is available describing the essential ingredients of single or multicomponent interventions. Moreover, there is little information describing the effectiveness of such interventions. This paper presents findings from an extensive literature review designed to address this knowledge gap (Clarkson et al. 2016). It provides evidence to guide clinical practice in home support and assist in the commissioning and redesign of multidisciplinary approaches to the care of older people with dementia and their carers.

**Background**

Psychosocial interventions for dementia are part of a wide range of non-pharmacological interventions available for people with long-term conditions that are delivered by several professionals, most notably nurses, occupational therapists and social workers (Reilly et al. 2010; Bökberg et al. 2015). Internationally, this is in the context of care delivered by family supported by community health and social care teams, comprising mental health nurses, district nurses, social workers, support workers and care assistants, among others (Lethin et al. 2016). In England, their relevance for clinical nursing has been reinforced by the policy goal of reducing antipsychotic drug prescribing due to lack of effectiveness and potential side-effects (Department of Health 2009). However, there is a paucity of robust scientific evidence on the effectiveness, implementation and feasibility of psychosocial interventions. Attempts to systematically review effectiveness of particular types or ranges of interventions in various settings are often inconclusive. Furthermore, meta-analyses of studies investigating home support to older people in general (Elkan et al. 2001) have argued that more precise descriptions of the actual components employed (‘who, did what, where and how’) are needed. Knowledge of such components in specialist support for dementia would
be particularly beneficial. Yet, the evidence regarding how particular components (‘active ingredients’) of these interventions could be combined into different approaches to home support and the likely effects of adopting these is relatively weak.

To respond to these challenges, this review draws on and extends previous UK government funded work (Challis et al. 2010). It is part of a wider research programme (National Institute for Health Research, Programme Grants for Applied Research No. DTC-RP-PG-0311-12003). The two-stage review appraises evidence of home support arrangements for people with dementia and their carers and particularly of their effectiveness. This paper presents an overview of systematic reviews evaluating evidence for the effectiveness of psychosocial support interventions in any setting (for example nursing/care homes, day centres and at home). It identifies the effective components of support in dementia both for early and later stages. Treatment approaches are reviewed, irrespective of the setting (for example, home and nursing or care homes) and personnel (for example nurses and occupational therapists) delivering them to elicit the components of effective dementia care.

The review

Aim

To identify the components of effective psychosocial interventions in dementia care.

Design

The review followed established guidelines for conducting and reporting systematic reviews and overview of reviews (Becker & Oxman 2009; Centre for Reviews and Dissemination 2009; Moher et al. 2009). The protocol was registered with PROSPERO (Reference/ID No

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CRD42014008890). A two-stage design was used (see protocol - Clarkson et al. 2016): (1) an overview of systematic reviews of psychosocial interventions for dementia from RCTs in various settings; (2) a systematic review of the effectiveness of home support interventions, identifying the extent to which components identified from stage 1 are present in different models of support (reported in a separate paper, Clarkson et al. 2017). The focus of the first stage reported in this paper was an overview of published systematic reviews of psychosocial (i.e. non-pharmacological) interventions for dementia in various settings to identify their active ingredients, or components (Teri et al. 2005).

Search methods

Search terms were derived after discussion between the reviewers and piloted by an experienced systematic reviewer prior to the development of the protocol (see supplementary information File S1). Searches were not restricted by date parameters or year of publication and were conducted by three reviewers. This was a concurrent data collection with searches conducted between September 2013 and April 2014 with that for Stage 1 completed within a month. Additionally, recent systematic reviews known to the reviewers were included.

Search outcome

Two researchers selected reviews for inclusion and agreed exclusions. One screened the titles and abstracts of all potentially relevant citations against the inclusion criteria, with a second reviewing these decisions. Where this was not clear, the full-text of the study was read and uncertainties resolved through discussion with comments by a third, independent reviewer. Subsequently, one researcher read the full text of each of the included reviews and extracted
data concerning their key characteristics. A second researcher confirmed the inclusion of these reviews and independently extracted data from all.

Quality appraisal

Three reviewers, using a checklist of criteria, assessed the quality of the included studies independently using the AMSTAR tool (Shea et al. 2009; with more detailed notes/guidance at: http://amstar.ca/Armstar_checklist.php, accessed 20/04/2015). The quality score ranged from 0-11, with a higher score indicating greater quality. Discrepancies were resolved by discussion. Table 1 shows the quality rating of each review. No review scored positively for the presence of information concerning conflict of interest in the primary studies (Shea et al. 2009); therefore, ratings were between 1 and 10. Non Cochrane reviews did not include lists of excluded studies and so tended to have lower scores. Most (n=30) provided detail on the characteristics of included studies. Of the 23 non-Cochrane reviews, only two scored positively on the AMSTAR criterion of a priori design, i.e. published or registered study protocol (Gallagher-Thompson & Coon 2007, Logsdon et al. 2007). There were six notably high scoring reviews (AMSTAR score=10) (Vink et al. 2004, Woods et al. 2005, 2012, Forbes et al. 2008, 2009, Vernooij-Dassen et al. 2011) and three very low scoring (AMSTAR score=1) (Lou 2001; Spira & Edelstein 2006, Sánchez et al. 2012).

Data abstraction

To collate evidence, data were extracted into Excel databases using a proforma based on the PICOS (Population, Interventions, Comparators, Outcomes and Study designs framework, as per protocol) (Centre for Reviews and Dissemination 2009; Clarkson et al. 2016). Data
extraction was based primarily on that contained in the reviews. However, occasionally, the abstracts or content of primary studies were checked, for information regarding study design and details of the intervention.

Data were extracted from included reviews according to named intervention categories with shared characteristics (for example, cognitive stimulation, music therapy, or exercise training) (Olazarán et al. 2010; Dickson et al. 2012). Each was described as precisely as possible, including definition, techniques and original references. Category descriptions were mutually exclusive and presented according to the amendment of an existing template (Davidson et al. 2003), as per protocol (Clarkson et al. 2016).

Four levels of statement were used to rate effectiveness evidence for the categories, based on a scheme developed by the Cochrane Collaboration (Ryan et al., 2014) and similar to the Oxford Centre of Evidence-Based Medicine guidelines adopted by some included reviews (Livingston et al. 2005; Olazarán et al. 2010). The number and quality of reviews and that of primary studies were taken into consideration when making judgements about the level of evidence and more weight was given to high quality reviews of specific interventions:

- ‘Sufficient evidence’ (Level 1): Consistent evidence from high, moderate quality, or reviews of specific interventions;
- ‘Some evidence’ (Level 2): Less consistent, second level recommendation by high or moderate quality reviews, or with majority of reviews or studies in favour of intervention;
- ‘Insufficient evidence’ (Level 3): Conflicting results, or evidence suggesting ineffectiveness;
• ‘Insufficient evidence to determine’ (Level 4): Due to lack of primary studies or information.

Synthesis

A narrative summary was undertaken to elicit the components to take forward into Stage 2 of the review derived from a framework used in the design of behavior change interventions (Michie et al. 2011). Five steps were used to synthesize the information (see supplementary information File S2). Following data extraction and data synthesis, preliminary findings on components were discussed in the ongoing Patient, Public and Carer Involvement (PPCI) collaboration in the programme.

Results

Study selection

A total of 279 reviews were initially extracted, of which 36 met the inclusion criteria (Figure 1). Over half (148; 53%) of excluded reviews were of pharmacological interventions. Of those included, 21 (58%) were of specific, named interventions (for example, physical activity programmes) – termed here ‘narrow reviews’, among which 13 were Cochrane reviews. Fifteen (42%) were reviews of a range of interventions – termed here ‘broad reviews’.

Study characteristics

Table 1 provides descriptive data from each review. There were three ‘empty reviews’ (Yaffe et al. 2012); these were systematic reviews finding no studies eligible for inclusion (Price et al. 2001; Hermans et al. 2007; Martin et al. 2008). Included reviews often used several
research designs as inclusion criteria. However, only the numbers of randomised studies in each review are reported here. The systematic review reported by Basu and Brinson (2010) and not their overview, was reviewed here. Twenty-one (58%) reviews focused on people with dementia and seven (19%) on interventions to carers, with eight (22%) reviewing interventions to both. Very few specified severity of dementia as one of their inclusion criteria. Some (n=13) did not specify stage of dementia but required information from primary studies to enable this judgement to be made. Reviews contained a range of studies with different foci and a range of outcomes.

Olazarán et al. (2010) was used to categorise interventions for people with dementia (Table 2) and carers (Table 3). There were different typologies available from the reviews by which interventions could be grouped and sometimes there was no clear cut dividing line between categories. Some categories were more general (for example emotion oriented approaches) and some specific (for example light therapy). There was overlap between the cognitive stimulation and cognitive training/rehabilitation categories but these were considered sufficiently distinct to warrant inclusion separately. Cognitive stimulation generally stimulates information processing in the person with dementia whereas cognitive training/rehabilitation is more specific, entailing guided practice on cognitive functions using specific techniques and technologies (for example memory aids). Twenty intervention categories for people with dementia and six for carers with evidence of effectiveness were identified.

The detail available to describe each intervention was variable. Content was predominantly based on how interventions were described in the reviews and not in each of the primary studies. Details of provider were sometimes partial; but interventions were delivered by a
range of professionals, family carers and researchers. A mix of individual and group sessions was identified. The predominant settings for interventions were nursing/care homes (n=18 reviews) with 11 conducted at home (6 for the person with dementia and 5 for carers). There was variation in the intensity of interventions. Where reviews contained little information on the implementation of the interventions it was difficult to make judgements about their fidelity (the term only appeared in one review; Elvish et al. 2013). Where such data were absent, we report information on the methodological conduct of the studies as a proxy for this (for example risk of bias measures, such as assignment and assessment concealment). Some reviews described a process analysis, whereby studies included details on whether the intervention protocol was complied with. For example, one review found that two of the 11 included studies reported process analyses (Vernooij-Dassen et al. 2011). Overall there was a lack of evidence whether interventions were undertaken as intended.

**Effectiveness evidence: people with dementia**

*Sufficient evidence (Level 1)*

There was sufficient evidence for the effectiveness of two intervention categories. The first suggested that cognitive stimulation benefits cognition in people with early stage dementia (Olazarán et al. 2010, Woods et al. 2012). Although less conclusive, its effect on quality of life was also promising (Cooper et al. 2012, Woods et al. 2012). There was also evidence for its effectiveness on behaviour and neuropsychiatric symptoms (Livingston et al. 2005, Olazarán et al. 2010). Although not consistent, evidence from the majority showed that reality orientation had positive effects on both cognition and behaviour (Spector et al. 2000, Livingston et al. 2005, Olazarán et al. 2010, Woods et al. 2012). In most studies, however, participants were resident in nursing/care homes. Second, cognitive training was effective for improving cognition (Sitzer et al. 2006, Olazarán et al. 2010). It was also viewed as
promising for activities of daily living and depression. Restorative strategies, improving functioning in specific domains with the goal of returning functioning to premorbid levels, demonstrated the greatest overall effect (Sitzer et al. 2006). Participants were people with early stage dementia living at home, in nursing/care homes or geriatric units; and individual sessions were more common than that for cognitive stimulation therapies.

Some evidence (Level 2)

There was some evidence for the effectiveness of four intervention categories: behavioural therapy; reminiscence; sensory stimulation; and activities of daily living (ADL) training. For behavioural therapy, evidence of effectiveness was noted for both people with dementia living at home and those in nursing homes (Livingston et al. 2005, Logsdon et al. 2007, Olazarán et al. 2010). However, evidence of its effectiveness for behaviour management was mixed (Livingston et al. 2005, Logsdon et al. 2007, Kong et al. 2009, Olazarán et al. 2010). Three reviews identified two trials on simulated presence, providing limited evidence of effectiveness in reducing agitation and withdrawn behaviour for people with later stage dementia (Livingston et al. 2005, Kong et al. 2009, Kverno et al. 2009).

Evidence of effectiveness of reminiscence was also mixed (Livingston et al. 2005, Woods et al. 2005, Olazarán et al. 2010, Sánchez et al. 2012, Subramaniam & Woods 2012). A Cochrane review found evidence of effectiveness on cognition, mood, behaviour, caregiver strain and staff knowledge (Woods et al. 2005) and a more recent review judged the intervention as potentially promising (Subramaniam & Woods 2012). However, other reviewers concluded that there was insufficient evidence (Livingston et al. 2005; Olazarán et al. 2010). Reminiscence therapy was conducted in both individual and group sessions, for
people with both early and later stage dementia. In a minority of trials the target population was people with dementia living at home.

There was some evidence to show that sensory stimulation was effective on the behaviour and mood of people with dementia (Kong et al. 2009, Kverno et al. 2009, Livingston et al. 2005, Kim et al. 2012, Sánchez et al. 2012). Evidence of effectiveness of multisensory stimulation/snoezelen to improve behaviour and reduce apathy was mixed (Livingston et al. 2005, Kverno et al. 2009, Olazarán et al. 2010, Kim et al. 2012, Sánchez et al. 2012). There was limited evidence to suggest that aromatherapies may have short-term effects in reducing agitation and apathy (Kverno et al. 2009). Whilst there was some evidence concerning acupressure, acupuncture, reflexology, thermal bath and white noise, it was difficult to draw conclusions of their value (Livingston et al. 2005, Basu & Brinson 2010, Olazarán et al. 2010, Pieper et al. 2013). The majority of trials in this category were conducted in nursing/care homes, for people with later stage dementia. Some evidence on the effectiveness of ADL training was identified by one review (Olarazarán et al. 2010) with trials conducted for people with dementia in nursing/care homes, in both individual and group sessions.

*Insufficient evidence (Level 3)*

There was insufficient evidence of effectiveness for seven intervention categories: physical activity/exercise, music, light therapy, recreational activity, massage and touch, case management and validation therapy. Ten reviews identified 18 studies on physical exercise. Two of these concluded that there was no clear evidence of effectiveness with regard to a range of outcomes (Forbes et al. 2008, Olazarán et al. 2010). In a third, there was some evidence that physical exercise had beneficial effect on walking performance and activities of daily living (Littbrand et al. 2011). The majority were conducted in residential care.

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Over 20 studies on the use of music for people with dementia were identified by six reviews. There was some evidence of its effectiveness for treating neuropsychiatric symptoms (Kverno et al. 2009), or reducing agitation in the short-term (Livingston et al. 2005). However, two reviews concluded that there was insufficient evidence to recommend music therapy due to poor methodological quality of the included studies (Olazarán et al. 2010; Vink et al. 2004). In all studies where information was available, participants resided in nursing/care homes.

Five reviews identified 11 studies examining the effect of light therapy on residents of nursing/care homes or geriatric units in psychiatric hospital. Three reviews concluded that there was insufficient evidence to assess the value of light therapy on behavioural disturbances, cognition, psychiatric disturbances and sleep, due to methodological weaknesses (Forbes et al. 2009, Basu & Brinson 2010, Olazarán et al. 2010).

The recreational activity category included 11 studies in six reviews. Evidence of effectiveness for reducing agitation was conflicting and that on apathy, depression and engagement was insufficient to determine. Participants were people with dementia living at home and in nursing/care homes.

Massage and touch were identified in a smaller number of studies. Whilst one review, concluded there was limited evidence for massage and touch for problems such as agitation (Hansen et al. 2006), another stated that evidence of effectiveness was lacking (Olazarán et al. 2010). Participants resided in nursing/care homes or other institutions.

The case management category was diverse and there was insufficient evidence of effectiveness. Limited evidence suggested that case management was ineffective for depression, psychosis and behavioural symptoms (Basu & Brinson 2010) and evidence on
reducing institutionalisation was conflicting (Livingston et al. 2005, Spijker et al. 2008). However, there was some evidence to suggest that personalised care plans could reduce pain or discomfort (Pieper et al. 2013) but were ineffective in improving quality of life (Cooper et al. 2012). Most studies in this category were, perhaps, surprisingly conducted in nursing/care homes.

Only five studies on validation therapy were identified, for people with dementia living in nursing/care homes. There was insufficient evidence to support the efficacy of validation therapy for people with dementia or cognitive impairment.

**Insufficient evidence to determine (Level 4)**

There was insufficient evidence to determine effectiveness of a range of interventions. These included animal/pet therapy, muscle relaxation, psychotherapy/counselling, transcutaneous electrical stimulation and transcranial magnetic stimulation, special care units and palliative care.

**Effectiveness evidence: carers**

**Some evidence (Level 2)**

The largest intervention category was caregiver education and training (Table 3). There was some evidence of effectiveness, with more reviews suggesting effective (Ayalon et al. 2006, Gallagher-Thompson & Coon 2007, Logsdon et al. 2007, Elvish et al. 2013) or mixed evidence (Livingston et al. 2005, Olazarán et al. 2010, Li et al. 2013) than ineffective (Cooper et al. 2007, 2012, Kong et al. 2009). Evidence of effectiveness of caregiver training based on behaviour management was reported in some reviews. There was also evidence of effectiveness of caregiver skills building, communication and interactions with patients and
technology based interventions. Psychotherapy and counselling was the second largest category of interventions delivered to carers with some evidence to support its effectiveness. Most interventions focused on carers of people with dementia living at home. Most of reviews evaluated cognitive behaviour therapy. Counselling was sometimes used as part of an intervention.

**Insufficient evidence (Level 3)**

A Cochrane review concluded that evidence on respite care did not demonstrate any benefits or adverse effects for people with dementia and their carers (Lee & Cameron 2004).

**Insufficient to determine (Level 4)**

The evidence for caregiver support groups, case management and physical exercise were insufficient to determine effectiveness.

**Interventions for both people with dementia and carers**

Nine reviews evaluated multicomponent interventions to both people with dementia and carers. One intervention included adapting the home environment to the capacities of people with dementia and providing training, counselling and support, delivered by occupational therapists and psychologists. There was insufficient evidence of effectiveness (Level 3) for this intervention with only modest potential for quality of life. There was insufficient evidence to determine (Level 4) the effectiveness of four interventions. These were: caregiver training in behaviour management and exercise for the person with dementia; information and training on night-time insomnia for carers and daily walk and increased light exposure for the person with dementia; individual, family and ad hoc counselling; and support group attendance.
Synthesis

Table S3 (supplementary information online) describes each component identified from the synthesis. Data on the mix of components in each review is available from the authors. There were specific theory-linked techniques that may have been responsible for an intervention’s effects. For example, the provision of education or advice to carers about dementia is effective when delivered through the Information-Motivation-Behavioural Skills model. Providing information about dementia, for example through information leaflets or websites, has potential to change carers’ behaviour, but information alone is insufficient to achieve this (Mazzuca 1982). The carer’s motivation to engage with the information and the development of behavioural skills, such as ‘how to respond’, are crucial determinants of effectiveness (World Health Organisation 2003).

The provision of structured physical activity can improve learning and memory and slow down physical decline (Cotman & Berchtold 2007). Engaging in this as a group activity can also have an impact on well-being, through participants increasing their social networks (Bowes et al. 2013). Behaviour management for carers may also be an effective element of interventions. This is achieved by identifying, analysing and correcting maladaptive beliefs that may be contributing to caregiver strain in dealing with the behaviours of the person with dementia (Losada et al. 2011).

Observations from PPCI group

The group likened the components of interventions to ‘ingredients’, like those involved in baking a cake, which could interact in different ways to produce the desired result, for example increased well-being of the carer or person with dementia. Similarly, a carers
support service might contain three ingredients: emotional support, information and advice. Each might act differently to influence carer well-being, through increased competence in their role and less guilt about decision making on behalf of their relative (see Figure 2).

Tailoring interventions to the stage of dementia was identified as a critical success factor. For example, people with dementia in later stages may require assistance with the activities of daily living inappropriate for people in early stage of the condition. For carers, respite was signalled as important in the later stages of dementia.

Discussion

The aim of Stage 1 of this systematic review of effective home support to people with dementia was to identify components and appraise the evidence for their effectiveness, irrespective of setting. There was sufficient evidence for the effectiveness of two interventions: cognitive stimulation and cognitive training for people with dementia. For carers, evidence of effectiveness for the interventions identified was insufficient. Nevertheless, from these interventions, 14 components were identified. Nine related to the person with dementia: behaviour management; care co-ordination; cognitive training; daily living assistance; emotional support; environmental modifications; physical activity; sensory enhancement/relaxation; and social engagement. Only five focused on the caregiver: behaviour management; education/advice; emotional support; respite; and social support.

However, there was insufficient evidence of effectiveness for non-pharmacological interventions for those living at home. Many of the interventions reported were undertaken in nursing/care homes and few undertaken with people with dementia and their carers at home. This could be associated with the human and financial resources required to deliver
these interventions to people with dementia at home. For example, whilst it was more common for cognitive training to be conducted in people’s own homes in individual formats, cognitive stimulation interventions were usually conducted in nursing/care homes in group formats, possibly because the latter were delivered by specialists whereas the former could be delivered by family carers.

In particular, there was insufficient evidence for the effectiveness of case management (also known as care coordination) with its broad objective of tailoring support to identified need for older people requiring long-term care to enable them to live at home with one of its defining characteristics being the breadth of services required to achieve this goal (Applebaum & Austin 1990). However, a Cochrane review on case management approaches to home support for dementia, published after the study selection of this overview, has identified some evidence on its effectiveness in reducing admission to care homes and overall healthcare costs, but its effect on patient depression, functional abilities or cognition remains uncertain. It also noted the importance of specificity of case management content influencing effectiveness (Reilly et al. 2015).

Other research has demonstrated that specific forms of case management may provide effective support to carers, captured through measures of burden and general health (Challis et al. 2016; Venables et al. 2006). This contrasts with findings from this overview which provided some evidence to support the effectiveness of interventions based on education and training and psychotherapy and counselling, in terms of improving carers’ psychological well-being which were where the person they cared for was living at home. Respite care, primarily regarded as way of relieving carers of the burden of looking after people with dementia, was not identified as showing sufficient evidence of effectiveness, as a component
of home support in this overview. Whilst it might be construed as being an element of a care plan in the component of care coordination its absence was commented on by the PPCI group, indicating the priority it is accorded by people currently caring for people with dementia.

Components identified from this overview were theory-linked, in that they contained specific mechanisms of action that may be responsible for their potential effects. For example, it may be that the component, cognitive training, was responsible for most of the effects of the intervention, cognitive training/rehabilitation, through improving neuronal functioning (Swaab et al. 2002). However, the intervention may also have contained emotional support or other components, particularly where provided by carers, trained to provide this intervention by specialist staff. Moreover, the consultation with the PPCI group highlighted both the complexity of needs and the challenge of meeting them. To advance knowledge and guide future clinical practice with regard to support provided to people with dementia and their carers at home only interventions delivered in this setting will be included in the second stage of the review.

Limitations

This narrative summary has certain limitations. Importantly, some items of the AMSTAR tool focus on the quality of reporting of systematic reviews at the expense of their methodological quality (Faggion 2015). For example, none of the reviews scored positively on item 11 (conflict of interest statement included), despite some of them rated as of high quality (see Table 1). Furthermore, sometimes the primary studies did not provide enough information making it difficult for the systematic reviews to draw conclusions about certain
aspects of the studies such as the implementation process and fidelity (Spector et al. 2000, Vernooij-Dassen et al. 2011). This is even more the case for overviews due to the variations in reporting style of the systematic reviews.

Other limitations reflect the scope and objectives of this paper, which aimed to provide an overview of the range of interventions and their effectiveness and to identify common components, to be evaluated in more detail in the next stage. As such, the findings reported are necessarily largely limited to those contained in the reviews. Details of the primary studies in each category, such as the number of participants and control condition of studies, could not be reported here, although these might have been usefully contributed to judgements about the conclusions.

**Conclusion**

This review provides an overview of the evidence regarding psychosocial interventions for people with dementia and their carers and their potential effectiveness, using a range of outcome measures. In terms of methodology, future research could benefit from reducing or minimising heterogeneity of the study sample, for example, by specifying the stage of dementia for which the intervention might be of benefit. Replication of existing small scale good quality studies could also be fruitful. Most people with dementia live at home. However, the majority of the reviews described here, report research undertaken in other settings. There is therefore an important gap in the evidence base required to guide practitioners – nurses, social workers and occupational therapists – coordinating long-term support to people with dementia at home. Nevertheless, evidence from this review will help to inform policy makers and service planners, assist in establishing the utility and
effectiveness of interventions in a variety of settings and inform clinical practice in care homes and other group living environments/settings. More generally, evidence is required as to what constitutes effective care for people with dementia living at home.

Author Contributions:
All authors have agreed on the final version and meet at least one of the following criteria (recommended by the ICMJE*):

1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
2) drafting the article or revising it critically for important intellectual content.

* http://www.icmje.org/recommendations/

References


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Littbrand H., Stenvall M. & Rosendahl E. (2011) Applicability and effects of physical exercise on physical and cognitive functions and activities of daily living among


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http://www.biomedcentral.com/1472-6963/14/245.


Table 1 Reviews of psychosocial interventions in dementia

<table>
<thead>
<tr>
<th>Review &amp; year</th>
<th>Date of last search</th>
<th>Number of studies</th>
<th>Types of participants</th>
<th>Dementia stage</th>
<th>Intervention categories</th>
<th>Foci of interventions</th>
<th>Outcome foci</th>
<th>Quality rating</th>
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<tbody>
<tr>
<td>Elvish et al. (2013)</td>
<td>Not stated</td>
<td>14 (9/4/1)</td>
<td>Carers</td>
<td>Not specified</td>
<td>CG EDU, CG PSY</td>
<td>Carer stress and well-being</td>
<td>Anxiety, attitudes, carer burden, depression, QoL, well-being</td>
<td>5</td>
</tr>
<tr>
<td>Forbes et al. (2008)</td>
<td>09/09/2007</td>
<td>4 (2/3/0)</td>
<td>People with dementia</td>
<td>Early and later stage</td>
<td>PHY</td>
<td>Cognition, function, behaviour, depression, and mortality</td>
<td>Behaviour, cognition, function, mood</td>
<td>10</td>
</tr>
<tr>
<td>Forbes et al. (2009)</td>
<td>04/03/2008</td>
<td>8 (6/2/0)</td>
<td>People with dementia</td>
<td>Early and later stage</td>
<td>LT</td>
<td>Cognitive, sleep, functional, behavioural, or psychiatric disturbances</td>
<td>ADL, agitation, cognition, depression, institutionalisation, sleep</td>
<td>10</td>
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<tr>
<td>Hall et al. (2011)</td>
<td>Not stated</td>
<td>2 (1/1/0)</td>
<td>People with dementia</td>
<td>Later stage</td>
<td>SCU</td>
<td>Palliative care</td>
<td>Behaviours, discomfort, physical complications, mortality, quality of care</td>
<td>7</td>
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<tr>
<td>Hansen et al. (2006)</td>
<td>12/07/2005</td>
<td>2 (0/2/0)</td>
<td>People with dementia</td>
<td>Not specified</td>
<td>MAT</td>
<td>Anxiety, agitation, depression</td>
<td>Agitation, emotional well-being, QoL, cognition, survival, medication use, caregiver burden</td>
<td>8</td>
</tr>
<tr>
<td>Hermans et al. (2007)</td>
<td>11/06/2009³</td>
<td>0⁴</td>
<td>People with dementia</td>
<td>Not specified</td>
<td>No interventions found</td>
<td>Wandering in the domestic setting</td>
<td>Not applicable</td>
<td>7</td>
</tr>
<tr>
<td>Lee &amp; Cameron (2004)</td>
<td>10/12/2007³</td>
<td>3 (0/2/1)</td>
<td>Carers</td>
<td>Early and later stage</td>
<td>RC</td>
<td>Carer stress and well-being</td>
<td>Carer burden, carer mood</td>
<td>8</td>
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<tr>
<td>Li et al. (2013)</td>
<td>07/2011</td>
<td>8 (3/1/4)</td>
<td>Carers</td>
<td>Not Specified</td>
<td>CG EDU, CG PSY</td>
<td>Coping skills, psychological morbidity</td>
<td>Coping style, psychological morbidity</td>
<td>5</td>
</tr>
<tr>
<td>Littbrand et al. (2011)</td>
<td>01/09/2010</td>
<td>10 (6/4/0)</td>
<td>People with dementia</td>
<td>Early and later stage</td>
<td>PHY</td>
<td>Physical and cognitive functions, ADL</td>
<td>Mobility, balance, muscle strength, cognitive function, ADL</td>
<td>5</td>
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<tr>
<td>Lou (2001)</td>
<td>Not stated</td>
<td>1 (0/1/0)</td>
<td>People with dementia</td>
<td>Later stage</td>
<td>MUT</td>
<td>Agitated/aggressive behaviour</td>
<td>Aggressive behaviour</td>
<td>1</td>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>Study Ref</th>
<th>Date</th>
<th>No.</th>
<th>People with dementia</th>
<th>Not specified</th>
<th>Measure</th>
<th>Health and social care needs</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Martin et al. (2008)</td>
<td>01/03/2007</td>
<td>04</td>
<td>People with dementia</td>
<td>Not specified</td>
<td>ENM</td>
<td>Health and social care needs</td>
<td>Not applicable</td>
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<tr>
<td>Neal &amp; Barton Wright (2003)</td>
<td>05/08/2005</td>
<td>3 (1/3/0)</td>
<td>People with dementia</td>
<td>Not specified</td>
<td>VAL</td>
<td>Cognitive and behavioural features manifested by people with dementia</td>
<td>Cognition, agitation and social behaviour, mood, ADLs</td>
</tr>
<tr>
<td>Price et al. (2001)</td>
<td>09/03/2009</td>
<td>04</td>
<td>People with dementia</td>
<td>Not specified</td>
<td>ENM</td>
<td>Wandering</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sánchez et al. (2013)</td>
<td>Not stated</td>
<td>9 (5/4/0)</td>
<td>People with dementia</td>
<td>Later stage</td>
<td>SS(O)</td>
<td>Behaviour, mood</td>
<td>Behaviour, cognition, communication, functional status mood</td>
</tr>
<tr>
<td>Sitzer et al. (2006)</td>
<td>Not stated</td>
<td>12 (5/0/7)</td>
<td>People with dementia</td>
<td>Early stage</td>
<td>CT, CS</td>
<td>Cognition</td>
<td>Cognition; ADLS; QoL; Mood</td>
</tr>
<tr>
<td>Subramaniam &amp; Woods (2012)</td>
<td>12/2011</td>
<td>5 (2/3/0)</td>
<td>People with dementia</td>
<td>Early and later stage</td>
<td>REM</td>
<td>Psychosocial well-being</td>
<td>Cognition, Quality of Life</td>
</tr>
<tr>
<td>Vernooij-Dassen et al. (2011)</td>
<td>05/04/2009</td>
<td>11 (3/3/4)</td>
<td>Carers</td>
<td>Not specified</td>
<td>PSY</td>
<td>Psychological morbidity and stress</td>
<td>Anxiety, depression, carer burden and coping; QoL, healthcare utilisation (PWD)</td>
</tr>
<tr>
<td>Vink et al. (2004)</td>
<td>06/2010</td>
<td>10 (5/5/0)</td>
<td>People with dementia</td>
<td>Not specified</td>
<td>MUT</td>
<td>Behavioural, social, cognitive and emotional problems</td>
<td>Problem behaviours, cognition, emotional wellbeing and social behaviours</td>
</tr>
<tr>
<td>Woods et al. (2005)</td>
<td>04/05/2004</td>
<td>5 (3/5/0)</td>
<td>People with dementia</td>
<td>Early and later stage</td>
<td>REM</td>
<td>Mood, cognition, well-being</td>
<td>Well-being, mood, QoL, communication, cognition; caregiver strain</td>
</tr>
<tr>
<td><strong>Broad reviews</strong></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
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<tr>
<td><strong>Ayalon et al. (2006)</strong></td>
<td>12/2005</td>
<td>3 (0/3/0)</td>
<td>Carers</td>
<td>Early and later stage</td>
<td>CG EDU</td>
<td>Neuropsychiatric symptoms in people with dementia</td>
<td>Neuropsychiatric symptoms (e.g. hallucination, delusion, agitation, aggression, wandering)</td>
</tr>
<tr>
<td><strong>Basu &amp; Brinson (2010)</strong></td>
<td>06/08/2009</td>
<td>19&lt;sup&gt;5&lt;/sup&gt; (12/10/0)</td>
<td>People with dementia</td>
<td>Early and later stage</td>
<td>BT, CM, LT, MAT, MUT, REC, REM, SS(O), SE</td>
<td>Behavioural and psychological symptoms</td>
<td>Aggression, agitation, non-specific or multiple outcomes, anxiety, depression, apathy</td>
</tr>
<tr>
<td><strong>Brodaty &amp; Burns (2012)</strong></td>
<td>Not stated</td>
<td>8 (4/3/1)</td>
<td>People with dementia</td>
<td>Early and later stage</td>
<td>CS, PHY, REM, SCU, SS(O), PWD &amp; CG</td>
<td>Apathy</td>
<td>Outcomes relevant to apathy</td>
</tr>
<tr>
<td><strong>Cooper (2007)</strong></td>
<td>06/2005</td>
<td>11 (6/2/2)</td>
<td>Carers</td>
<td>Not specified</td>
<td>PHY, RC, CG EDU, CG PSY</td>
<td>Anxiety</td>
<td>Anxiety symptoms</td>
</tr>
<tr>
<td><strong>Cooper et al. (2012)</strong></td>
<td>01/2011</td>
<td>20 (7/13/2)</td>
<td>People with dementia &amp; carers</td>
<td>Early and later stage</td>
<td>CG EDU, CM, CS, CT, PHY, REM, SS(O), MUL, PWD &amp; CG</td>
<td>Quality of life</td>
<td>Quality of life</td>
</tr>
<tr>
<td><strong>Gallagher-Thompson &amp; Coon (2007)</strong></td>
<td>Not stated</td>
<td>17 (7/5/5)</td>
<td>Carers</td>
<td>Early and later stage</td>
<td>CG Edu; CG PSY; CG SG</td>
<td>Distress in family carers</td>
<td>Carer depression, Carer QoL, carer burden</td>
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<tr>
<td><strong>Kim et al. (2012)</strong></td>
<td>30/03/2011</td>
<td>9 (0/9/0)</td>
<td>People with dementia &amp; carers</td>
<td>Early and later stage</td>
<td>ADL, CT, SS, PWD &amp; CG MUL</td>
<td>Behavioural problems and depression</td>
<td>Behavioural problems and depression</td>
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<tr>
<td><strong>Kong et al. (2009)</strong></td>
<td>Not stated</td>
<td>14 (6/9/0)</td>
<td>People with dementia</td>
<td>Early and later stage</td>
<td>ADL, BT, PHY, LT, MAT, MUT, REC, SS(O)</td>
<td>Agitation</td>
<td>Agitation and behaviour</td>
</tr>
<tr>
<td><strong>Kverno et al. (2009)</strong></td>
<td>09/2008</td>
<td>13 (8/6/1)</td>
<td>People with dementia</td>
<td>Later stage</td>
<td>BT, LT, MUT, PHY, SS(O), VAL, SE</td>
<td>Neuropsychiatric symptoms</td>
<td>Agitation; depression, behaviour, mood; affect; rest-activity rhythm, apathy</td>
</tr>
<tr>
<td><strong>Livingston et al. (2005)</strong></td>
<td>07/2003</td>
<td>22 (17/5/5)</td>
<td>People with dementia &amp; carers</td>
<td>Not specified</td>
<td>BT, CS, MAT, MUT, PHY, REC, REL, REM, SCU, SS(O), VAL, SE, CG EDU, CG PSY</td>
<td>Neuropsychiatric Symptoms</td>
<td>Care costs, QoL, institutionalization, decreased medication or restraint</td>
</tr>
<tr>
<td>Study</td>
<td>Date</td>
<td>Sample Size</td>
<td>Setting/description</td>
<td>Interventions</td>
<td>Outcomes</td>
<td>Control Group</td>
<td>Rating</td>
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<tr>
<td>-------</td>
<td>------</td>
<td>-------------</td>
<td>---------------------</td>
<td>---------------</td>
<td>----------</td>
<td>--------------</td>
<td>--------</td>
</tr>
<tr>
<td>Logsdon et al. (2007)</td>
<td>01/01/2006</td>
<td>14 (8/6/1)</td>
<td>People with dementia &amp; carers</td>
<td>Early and later stage</td>
<td>BT, CG EDU, PWD &amp; CG</td>
<td>Disruptive behaviours</td>
<td>Memory, behaviour, agitation, depression, QoL, CG stress</td>
</tr>
<tr>
<td>Olazaran et al. (2010)</td>
<td>15/09/2008</td>
<td>179 (92/87/Ni)</td>
<td>People with dementia &amp; carers</td>
<td>Early and later stage</td>
<td>ADL, BT, CT, CS, LT, MAT, MUT, PHY, PSY, REC, REL, REM, SCU, SE, SS (O), TES, TMS, VAL, MUL, CG CM, CG EDU, CG RC, CG SG, CG MUL, PWD &amp; CG</td>
<td>Cognition, ADLs, behaviour, mood, physical, QoL, initialisation, restraints</td>
<td>Institutionisation, Cognition, ADLs, Behaviour, mood, QoL, restraints, CG mood, CG well-being, CG QoL</td>
</tr>
<tr>
<td>Pieper et al. (2013)</td>
<td>03/2013</td>
<td>5 (1/4/0)</td>
<td>People with dementia &amp; carers</td>
<td>Early and later stage</td>
<td>CM, PHY, SS(O)</td>
<td>Pain, challenging behaviour</td>
<td>Pain, behaviour (e.g. agitation), mood (e.g. depression, anxiety)</td>
</tr>
<tr>
<td>Spijker et al. (2008)</td>
<td>03/2006</td>
<td>8 (2/6/0)</td>
<td>People with dementia &amp; carers</td>
<td>Early and later stage</td>
<td>CM, CG EDU, CG PSY, PWD &amp; CG</td>
<td>Institutionalisation</td>
<td>Institutionalisation</td>
</tr>
<tr>
<td>Spira &amp; Edelstein (2006)</td>
<td>Not stated</td>
<td>3 (1/1/0)</td>
<td>People with dementia &amp; Carers</td>
<td>Not specified</td>
<td>BT, CG EDU, SE</td>
<td>Agitation</td>
<td>Agitation, orientation, behaviour</td>
</tr>
</tbody>
</table>

1. Randomised controlled studies (Active/Usual care/Waiting list controls). Some studies had multiple control groups; some had no information on the control condition.  
2. Early stage: described as mild to moderate, mean Mini Mental State Examination (MMSE) reported of 26-16, mean Global Deterioration Scale (GDS) of >3<=5; later stage: described as moderate to severe, mean MMSE reported of 0-15, mean GDS of >5.  
3. Cochrane reviews where new searches had been conducted by the closing date of this overview but with no change to conclusions.  
4. ‘Empty reviews’: systematic (Cochrane) reviews that found no studies eligible for inclusion.  
5. Only RCTs within the 42 ‘unique primary studies’ were considered by this overview.  
6. No information.

**Abbreviations:**  
ADL: activities of daily living; APT: animal/pet therapy; BT: behavioural therapy; CG: caregiver; CM: case/care management; CS: cognitive stimulation; CT: cognitive training/rehabilitation; EDU: education (and training); ENM: environmental modification; LT: light therapy; MAT: massage and touch; MUL: multicomponent; MUT: music therapy; PHY: physical exercise/activity; PSY: psychotherapy/counselling; PWD: people with dementia; RC: respite care; REC: recreational activity; REL: Muscle relaxation; REM: reminiscence; SCU: special care unit; SE: staff education; SG: support group; SS (O): sensory stimulation (other); TES: Transcutaneous electrical stimulation; TMS: Transcranial magnetic stimulation; VAL: validation
Table 2 Reviews of psychosocial interventions for dementia (stage 1) – ‘intervention categories’ person with dementia

<table>
<thead>
<tr>
<th>Intervention category</th>
<th>No. of reviews</th>
<th>No. of primary studies</th>
<th>Description of category</th>
<th>Effectiveness evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADL training</td>
<td>4</td>
<td>6</td>
<td>ADL/Functional training</td>
<td>Inadequate allocation concealment noted</td>
</tr>
<tr>
<td>Animal/pet therapy</td>
<td>1</td>
<td>1</td>
<td>Dog present</td>
<td>Insufficient evidence to determine</td>
</tr>
<tr>
<td>Behavioural therapy</td>
<td>6</td>
<td>20</td>
<td>Behaviour management, simulated presence</td>
<td>Some evidence</td>
</tr>
<tr>
<td>Case management</td>
<td>5</td>
<td>10</td>
<td>Psychiatric/nurse CM; identification of unmet needs and individualised care plans; person centred care, interdisciplinary teams</td>
<td>Insufficient evidence</td>
</tr>
<tr>
<td>Cognitive stimulation</td>
<td>7</td>
<td>27</td>
<td>Reality orientation board, themed activities, drawing,</td>
<td>Sufficient evidence</td>
</tr>
<tr>
<td>Intervention Type</td>
<td>N</td>
<td>M</td>
<td>Details</td>
<td>Interventionists</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>---</td>
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<td>-------------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Cognitive training/rehabilitation</td>
<td>5</td>
<td>18</td>
<td>Memory training, problem solving, goal oriented CT, teaching a behavioral chain backward</td>
<td>Family CG; OT</td>
</tr>
<tr>
<td>Light therapy</td>
<td>5</td>
<td>11</td>
<td>Bright light exposure, dawn-dusk simulation</td>
<td>Researchers, nursing home staff</td>
</tr>
<tr>
<td>Massage/touch</td>
<td>5</td>
<td>5</td>
<td>Hand massage; therapeutic touch</td>
<td>No information</td>
</tr>
<tr>
<td>Muscle relaxation</td>
<td>2</td>
<td>1</td>
<td>Sequential tension and relaxation of muscle groups</td>
<td>No information</td>
</tr>
<tr>
<td>Music therapy</td>
<td>6</td>
<td>22</td>
<td>Receptive and active music therapy</td>
<td>Music therapist</td>
</tr>
<tr>
<td><strong>Physical exercise</strong></td>
<td>10</td>
<td>18</td>
<td>Walking; strength, balance, flexibility and mobility training; rocking chair therapy</td>
<td>Researchers, nursing staff</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----</td>
<td>----</td>
<td>--------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td><strong>Psychotherapy/ Counselling</strong></td>
<td>1</td>
<td>2</td>
<td>Psychodynamic therapy; counselling</td>
<td>no information</td>
</tr>
<tr>
<td><strong>Recreational activity (REC)</strong></td>
<td>6</td>
<td>11</td>
<td>(Therapeutic) REC e.g. use of recreational items, group discussion and biking</td>
<td>No information</td>
</tr>
<tr>
<td><strong>Reminiscence (REM)</strong></td>
<td>11</td>
<td>15</td>
<td>Life story (e.g. the production of a life story book); REM focusing on a particular life phase</td>
<td>Researchers; social workers; trained care staff; OT; trained activity therapist; psychologists</td>
</tr>
<tr>
<td><strong>Sensory stimulation</strong></td>
<td>10</td>
<td>21</td>
<td>Multisensory stimulation/ Snoezelen; aroma; thermal bath; reflexology; acupressure; acupuncture; white noise</td>
<td>Reflexologist; researcher with acupressure training credits; care assistants</td>
</tr>
<tr>
<td><strong>Specialised care units</strong></td>
<td>5</td>
<td>4</td>
<td>Palliative care; stimulation retreat model of care; specialised</td>
<td>Physicians, care managers</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>Transcranial magnetic simulation</td>
<td>No information</td>
</tr>
<tr>
<td>--------------------------------------</td>
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<td>----------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Transcutaneous electrical stimulation</td>
<td>1</td>
<td>10</td>
<td>Transcutaneous electrical stimulation (cranial or dorsal stimulation)</td>
<td>No information</td>
</tr>
<tr>
<td>Validation</td>
<td>5</td>
<td>5</td>
<td>Interaction about topics of interest; programme activity e.g. singing or movement activity</td>
<td>Nursing staff, social work staff, researcher</td>
</tr>
<tr>
<td>Staff education</td>
<td>5</td>
<td>13</td>
<td>BM, PCC, validation and reminiscence into 24 hour care, avoiding use of restraints</td>
<td>Mental health clinicians, researchers, nurses, and care staff</td>
</tr>
</tbody>
</table>
Table 3 Reviews of psychosocial interventions for dementia (stage 1) – intervention categories caregiver

<table>
<thead>
<tr>
<th>Intervention category</th>
<th>No. of contributing reviews</th>
<th>No. of primary studies</th>
<th>Description of category</th>
<th>Effectiveness evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG Education and Training</td>
<td>12</td>
<td>58</td>
<td>BM, communication, increasing pleasant events, information, problem solving, skills training, technology based</td>
<td>Insufficient information</td>
</tr>
<tr>
<td>CG Psychotherapy/ Counselling</td>
<td>8</td>
<td>25</td>
<td>CBT, individual/family/group counselling, befriending</td>
<td>Insufficient information</td>
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<tr>
<td>Respite care</td>
<td>3</td>
<td>3</td>
<td>Respite care; assistance and companionship</td>
<td>No information</td>
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<tr>
<td>CG support group</td>
<td>2</td>
<td>2</td>
<td>Structured discussion groups, peer or professionally led groups</td>
<td>Insufficient evidence to determine</td>
</tr>
<tr>
<td>Physical exercise/activity</td>
<td>2</td>
<td>2</td>
<td>Physical activity, exercise</td>
<td>No information</td>
</tr>
<tr>
<td>Case management</td>
<td>1</td>
<td>4</td>
<td>Medicare, Managed care, case management</td>
<td>No information</td>
</tr>
</tbody>
</table>
Figure 1 PRISMA flow diagram for included reviews