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A scoping review of psychosocial interventions to enhance the relationship of couples living with dementia

Gilbert, Emma; Villa, Darrelle; Riley, Gerard A

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A scoping review of psychosocial interventions to enhance the relationship of couples living with dementia

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Emma Gilbert

Psychology, University of Birmingham, UK

Darrelle Villa

School of Psychology, University of Birmingham, UK

Gerard A Riley

Centre for Applied Psychology, University of Birmingham, UK

Abstract

When dealing with the challenges of dementia, spousal relationships have a central role to play in outcomes such as quality of care and emotional wellbeing. Dementia places strain on these relationships and so it is important to develop interventions to support them. This review maps out what interventions have been employed in this context. Searches of PsycInfo, PsycArticles, CI-NAHL, Embase, MEDLINE, and Web of Science were conducted to find studies describing interventions that aimed to improve some aspect of the relationship. Thirty-four studies were identified. A wide range and diversity of interventions were described, including life review, psychotherapy and ones focused on communication or creative activity. Reported benefits included meaningful interaction, emotional connection, reduced conflict and negativity, an increase in mutual support, and greater equality in the relationship. However, these can only be considered as potential rather than proven benefits because of the lack of methodological rigour of most of the studies. Future research on this topic would benefit from a closer links with research on the impact that dementia can have on spousal relationships, and from the use of stronger methodology.

Keywords

Dementia, relationships, intervention, couples, review, family, carers

Corresponding author: Emma Gilbert, School of Psychology, University of Birmingham, niversity of Birmingham, Hills Building, Edgbaston, Birmingham B15 2TT, UK. Email: exg193@student.bham.ac.uk



Introduction

The importance of family relationships in dementia is increasingly recognised. Dementia can have a major impact on these relationships and, in turn, the quality of those relationships can impact on how well those involved cope with the challenges posed by the dementia (Ablitt et al., 2009; Edwards et al., 2018; Quinn et al., 2009). Spousal relationships may be particularly important in this context because of the closeness of the relationship ('spousal' is used in this paper to refer to both marriages and partnerships). Dementia can often have a negative impact on the quality of this relationship. Spousal caregivers have frequently reported reductions in communication and companionship, in empathy and reciprocity, and in affection and intimacy, leading to an overall increase in dissatisfaction (Ablitt et al., 2009; Evans & Lee, 2014; Quinn et al., 2009). Some caregivers also report changes in their feelings towards their partner; a perception that the person with dementia feels like a stranger to them; and a perception that the relationship has changed from a marriage to a relationship characterised by the giving and receiving of care (Evans & Lee, 2014; Riley, 2019; Riley et al., 2013). Similarly, people with dementia have also described reductions in physical and emotional intimacy, and in communication and companionship (Alsawy et al., 2020; Clark et al., 2019; Harris, 2009; Wawrziczny et al., 2016), along with an increase in friction within the relationship, and feelings of being side-lined and ignored as the caregiver takes over (Clare & Shakespeare, 2004; Svanström & Dahlberg, 2004).

The quality of this relationship is, in turn, associated with the emotional well-being of the caregiver (Ablitt et al., 2009; Chunga et al., 2021; Riley et al., 2018) and the quality of the care they provide (Riley et al., 2020; Williamson & Shaffer, 2001). A good spousal relationship is also associated with less cognitive and social deterioration on the part of the person with dementia (Burgener & Twigg, 2002; Nordheim et al., 2009) and a reduced likelihood of moving to institutional care (Wright, 1998). Good relationships are also, of course, of intrinsic worth to those involved.

Given the value of the spousal relationship, it is important that interventions are developed to help couples maintain a good relationship as they deal with the challenges of dementia. The research literature contains a wide diversity of interventions intended to support spousal couples. Several scoping and systematic reviews of this literature have been published (Bielsten & Hellström, 2019a, 2019b; Moon & Adams, 2013; Rausch et al., 2017). These reviews have focused on any intervention involving the couple, not just on those that aimed to sustain or improve the relationship. Consequently, much space in these reviews is taken up with considering other outcomes such as cognitive function or emotional wellbeing rather than relational outcomes. A review focused more narrowly on relational outcomes would enable a more detailed consideration of this issue. Another issue about these reviews is that they operated with relatively strict inclusion criteria (e.g. both members of the couple had to attend the intervention together and both had to be living together in the community) and this resulted in a relatively small number of studies being reviewed. There is some merit in operating with looser inclusion criteria to gain a broader perspective on what interventions have been developed.

The current study builds on these previous reviews by operating with looser inclusion criteria and by focusing on literature describing interventions that were intended to improve some aspect of the spousal relationship. A scoping review was selected because the main purpose was to map the extent and nature of the literature on the topic (Grant & Booth, 2009; Peters et al., 2020). Consistent with the broad review purpose, dementia was taken to include a broad range of dementias (Alzheimer's Disease, Vascular Dementia, Dementia with Lewy bodies, frontotemporal and mixed dementias) and all stages of the disease were included (mild, moderate and severe). Similarly, interventions were broadly defined to include any intervention that used a psychosocial activity with the intention of facilitating some aspect of the couple's relationship. The review was therefore not confined to psychological therapies derived from some theoretical perspective (e.g. cognitive-behavioural therapy). Finally, all research designs were included. This inclusive approach aligns with scoping reviews which are well placed to answer broad descriptive questions about complex and heterogenous literature (Arksey & O'Malley, 2005; Peters et al., 2020; Pham et al., 2014). The diversity of the literature reviewed made it less appropriate to conduct a systematic review or meta-analysis focused on conclusions about therapy effectiveness.

The objectives of the scoping review were to:

- To describe and categorise the psychosocial interventions that have been used to enhance some aspect of the spousal relationship.
- To describe in general terms the designs and methodologies that have been used.
- To summarise the benefits from these interventions that have been reported.

Method

Arksey and O'Malley's (2005) framework for conducting scoping reviews, updated by Peters et al. (2020), guided the review. The first stage, defining the research questions, has been outlined in the Introduction. Details of the other three stages are outlined below. The scoping review was planned and conducted by a team consisting of a PhD researcher working academically in the field of dementia (first author) and two clinical psychologists (second and third author) one of whom has experience of working with dementia clinically and in a research capacity (third author).

Search strategy and identification of potential studies

An electronic search of PsycInfo, PsycArticles, CINAHL, Embase, MEDLINE, and Web of Science was completed on 29th October 2021. The databases were chosen because of their coverage of psychology, nursing, medicine, and social care. Table 1 presents the search terms and strategy used; keywords were searched within the title and abstract fields and all databases were searched from the date of their inception.

Table 2 presents the inclusion and exclusion criteria whose development was informed by the Participants, Concept, Context (PCC) framework (Peters et al., 2020) which were applied to screen the records.

Participants: Studies were considered for inclusion if they included couples where one member of the dyad had a diagnosis of dementia (specifically Alzheimer's Disease, Vascular Dementia, Dementia with Lewy bodies, frontotemporal and mixed dementias) and were at any stage of the disease (mild, moderate or severe). Where papers reported that the participants had dementia without specifying the type, it was assumed that they had one of these dementias, and that, if a sample all had dementia due to another neurodegenerative disease such as Parkinson's Disease or Huntington's Disease, this would have been indicated. Couples included married couples and partnerships. To expand on previous reviews, there was no requirement that the couple remained living together in the community for the duration of the intervention. Furthermore, studies were included that had mixed samples covering a range of family and other relationships (e.g. parent-child), as long as spousal findings were identifiable from those of other participants.

Concept: To introduce greater focus, studies were only included if the aims of the intervention included enhancement of some aspect of the relationship and the study reported an outcome evaluating the impact on the relationship. To avoid too narrow a definition of intervention, any psychosocial activity with the intention of facilitating the relationship was accepted as an

Condition	Relationship	Intervention
I.Dementia	3. Couple [*]	14. Intervention*
2.Alzheimer*	4. Spous [*]	15. Support [*]
	5. Partner [*]	16. Therap*
	6. Relationship*	I7. Educat [*]
	7. Famil [*]	18. Rehab*
	8. Dyad*	19. Treatment [*]
	9. Marital	20. Advice
	10. Marriage	21. Counselling
	II. Married	22. Self-management
	12. Husband	23. Self-care
	13. Wife	

Table I. Search terms.

(1 OR 2) AND(3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13) AND (14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23).

Table 2. Inclusion and exclusion criteria.

Inclusions	Exclusions
The paper reported some original evaluation data concerning an intervention.	Reviews, descriptions of interventions without an evaluation, protocols.
The paper was peer-reviewed for publication in a journal.	Conference abstracts, theses, policy documents, and other grey literature.
The intervention was psychosocial.	Medicinal or environmental interventions. Interventions that targeted some other variable that
The intervention aimed to improve some aspect of relationships, such as communication or affection, in a direct way. Papers were included if there were other aims alongside improving the relationship.	was not an aspect of the relationship, but may have indirectly led to improvements in the relationship (e.g. poor sleep patterns on the part of the person with dementia). Papers that reported an evaluation of the impact on the relationship, but this was not an aim of the intervention.
The paper reported an evaluation of the impact of the intervention on some aspect of the relationship.	Papers that did not contain any data about how the relationship was affected.
Participants included people with dementia and their spouse or partner. Couples were not required to be living together – one member could be living in residential care.	Papers reporting on other family relationships were only included if the data concerning the marriage/ partnership was reported in a way that made it possible to separate out the contribution to the findings of couples who were married or in a partnership. Only these findings were included in the review.
 Both partners were active participants in the intervention in some way: Both took part in the same therapy activities Only one partner took part in some activities, but there were activities in which both took part The researchers taught the therapy activity to the caregiver and the caregiver then engaged their partner in the activity. 	Intervention involved teaching skills to a caregiver, and the caregiver used those skills in managing the couple's situation, but the care-receiver did not take part in any therapeutic activity directly aimed at improving some aspect of the relationship.

intervention. Further broadening of the inclusion criteria was achieved by allowing interventions that had a wider range of treatment aims provided that at least one of those aims addressed the relationship. A basis for what constituted a relational aim and outcome was derived from consideration of range of relationship outcome measures, including the Revised Dyadic Adjustment Scale (Busby et al., 1995) and the Couple Satisfaction Index (Funk & Rogge, 2007), which reference relational constructs such as 'warmth', 'affection', 'communication' 'empathy', 'arguments', 'intimacy' and 'satisfaction'. Constructs derived from the literature about the impact of dementia on the relationship (summarised in the Introduction) were also used to guide selection (e.g. appraisals of the other person, equality in the relationship). The search was also restricted to studies in which both partners were active participants in the intervention in some way, even if that involved undertaking different interventions separately (see Table 2). Interventions that involved teaching skills to a caregiver, and the caregiver then using those skills in managing the couple's situation, were excluded if the care-receiver did not take part in any therapeutic activity directly aimed at improving some aspect of the relationship.

Context: The intervention could be delivered in any setting. There was no requirement that it was undertaken in the community.

Types of evidence sources: As appropriate to a scoping review (Peters et al., 2020) all study designs were included provided that they contained information about outcomes or experiences of the intervention. Both qualitative and quantitative studies were included.

Study selection

Study selection was conducted by screening all papers against the criteria outlined in Table 2. Papers were exported into Endnote and, at the first step, all duplicates were removed. At the next step, titles and abstracts were screened for eligibility. Finally, the full text was retrieved for papers that could not be excluded at the screening phase and they were read to enable a decision about whether they met the inclusion criteria. Due to limited resources, the screening was conducted by the first author. Any papers about which there was uncertainty of their eligibility, were discussed with the third author and decisions resolved by consensus.

Extracting and summarising the data

A charting table (Table 3) was devised to extract data relevant to the research questions of the review. Data extraction was completed by the first author and then checked by the third author. Decisions about how to categorise the interventions and outcomes were based on discussions of all three authors.

Results

The search of the databases yielded a total of 90,235 papers. After 52,703 duplicates were removed, 37,532 titles and abstracts were screened for eligibility. Of these, 37,291 were excluded, with 241 retrieved for the full text screening. At this stage, 207 were excluded for the reasons presented in Figure 1, leaving 34 papers to be included in the review.

Table 3 gives a summary description of each included paper. One study (Quayhagen et al., 2000) compared the outcomes of four interventions, three of which were eligible for inclusion. These three interventions are entered separately in Table 3. The papers by Williams et al. (2018 and 2021) report different evaluations of the same study; and the paper by Kindell et al. (2019) reports on the same

Study and type of	Participants, stage of dementia, and	Nature of intervention, aim that was relevant to relationship, and how the couple		Stu Relationship Outcomes and
intervention n	location	were involved	Design, Methodology, and Follow-up	Limitationsdy and type of intervention
Dassa (2018) Narrative	3 couples Moderate dementia Israel	Using a tablet with a personalized database containing music, photos etc. of personal meaning during nursing home visits. Aim was to promote communication. Same intervention together	Pre-post-intervention Qualitative analysis of pre- and post-interviews with caregiver, therapist log of sessions, and caregiver's post-session reactions. Interview questions specified but unclear if other methods of data collection followed a structured format. Method of analysis (content analysis) specified. There was also a follow-up phone call, but unclear if this followed a structured format or how	Gave them something enjoyable and meaningful to talk about; felt emotionally re-connected to care-receiver. Relational outcomes: Communication; enjoyment; emotional connection Limitations: Putting the material together could elicit distressing memories for the caregiver.
			it was analysed. Follow-up phone call at 2 months – findings not reported separately.	
Ha et al. (2021) Narrative	37 couples Mild dementia South Korea	Couples Life Story Approach – see entry for ingersoll-dayton et al. (2013) for aim and description Same intervention together	Pre-post-intervention Questionnaire about talkativeness (how often talked to partner in past week) and mutuality scale (items on helping and supporting one another, but also how much the couple agree, emotional connection, enjoying each other's company). Statistical analysis completed No fellow-un	No significant increase in talkativeness or mutuality for either caregivers or care- receivers.Relational outcomes: No significant effects
Ingersoll-Dayton et al. (2013) Narrative	24 couples Mild and moderate dementia USA	Couples Life Story Approach in which couples review their life together as a couple, and the caregiver learns more effective ways of communicating. Aim was to provide opportunity for meaningful and enjoyable interaction, enhance communication, and highlight the resilience and strength of the relationship Same intervention together	Post-intervention Open-ended questions about acceptability, delivered separately to each member of couple. Content of questions and method of analysis not specified. Notes made by therapists about the sessions and team discussion. Unclear if these followed a structured format, and method of analysis not specified. No follow-up	Enjoyed the activity; chance to engage more meaningfully with one another; communication advice helpful. Relational improvements: Communication; enjoyment; meaningful interaction Limitations: For caregivers, it could be upsetting to realise gaps in care-receiver's recollections, and it sometimes heightened their sense of loss.

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Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Ingersoll-Dayton et al. (2016) Narrative	29 couples Mild and moderate dementia USA and Japan	Couples Life Story Approach – see entry for ingersoll-dayton et al. (2013) for aim and description Same intervention together	Post-intervention Research teams met to discuss the progress of participants. Unclear if these followed a structured format and method of analysis not specified. No follow-up	Therapy provided opportunity to focus on their strengths and love for one another; to engage meaningfully and relate more with one another; to support each other to discuss losses in their life and integrate them into their story; to reflect on the richness of their life and relationship Relational improvements: Enjoyment; meaningful interaction; mutual support; emotional Connection Limitations; disagreements between couples interfered with collaboration on the task.
Kindell et al. (2018) Narrative	I couple Stage of dementia not specified UK	Listening to a music DVD, containing songs of personal significance, and clips of family members and care-receiver singing the songs. Aim was to enhance communication and interaction between the couple. Same intervention together	Pre-intervention Pre-intervention interview with couple about their life together; recordings of the couple conversing at home; and recordings of them making and using the DVD; and post-intervention interview. Content of interview not specified in detail and unclear whether other methods followed a structured format. Method of analysis (thematic narrative analysis and conversational analysis) specified. Statistical approach does not appear to have been used in the conversational analysis. Phone call with spouse at 6 months. Unclear if this followed a structured format, and method of analysis not specified. Follow-up was reported separately.	Increased interaction, particularly affectionate interaction such as increased touch and eye contact, enjoyed engaging together in an activity that care receiver had always enjoyed. Follow-up: Caregiver reported that they were still enjoying listening to the DVD. Relational improvements: Enjoyment; communication; emotional Connection Limitations: Caregiver sadness because it reminded them of how care-recipient used to be.

Table 3. (continued)

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Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Kindell et al. (2019) Narrative	5 couples, including the couple described in Kindell et al. (2018) Mild, moderate and severe dementia UK	Different formats of life story work tailored to each couple, e.g. personal topic-based books to support connection. Aim was to enhance communication and interaction between the couple. Same intervention together	Pre-post-intervention Same method as Kindell et al. (2018) with recordings of the couple using the particular format of life story work No follow-up	Helped the couple connect emotionally; increase interactions; and communicate more effectively. Gave caregiver opportunity to reflect on the personhood and identity of the care-receiver and understand them for who they are. Relational improvements: Communication; emotional connection; appraisals of other Person Limitations: Caregiver sadness when reflecting on what has been lost personally by the care-receiver and in the
Kwak et al. (2018) Narrative	56 couples Mild dementia South Korea	Couples Life Story Approach – see entry for ingersoll-dayton et al. (2013) for aim and description Same intervention together	Post-intervention. Qualitative analysis of separate interviews with caregiver and care-receiver. Interview questions and method of analysis (thematic analysis) specified. No follow-up No follow-up	Enjoying activity together – which led some couples to do more things together apart from the intervention; positive evaluation of their past life together; feeling gratitude towards one another for what they have done/are doing improved communication is better understanding of communication is sues and this had reduced friction in their interactions; feeling closer and more understanding of one another. Relational improvements: Communication; appraisals of other person; reduced conflict; enjoyment; emotional connection Limitations: In some cases, evoked guilt and regret about past aspects of the relationship; upsetting to realise gaps in care-receiver's recollections.

Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Melunsky et al. (2015) Narrative	18 dyads including 12 spousal couples Stage of dementia not specified UK	Group reminiscence therapy, and separate Post-intervention. Part of a wider RCT group sessions for caregivers on study, this study aimed to evaluate communication and using reminiscence at home. Aim was 'to promote a positive therapy. relationship', but not further specified. Qualitative analysis of interview questions a method of analysis (thematic analysis specified. No follow-up	Post-intervention. Part of a wider RCT study, this study aimed to evaluate reasons for mixed response to the therapy. Qualitative analysis of interviews with caregiver only. Interview questions and method of analysis (thematic analysis) specified. No follow-up	Improvements in communication as activity gave them something new to talk about; valuable quality time together; Realising care-receiver was still capable. Relational improvements: Communication; meaningful interaction; appraisals of other Person Limitations: Sadness at greater awareness of the care-receiver's deterioration; burden associated with attending and
Ryan et al. (2020) Narrative	15 dyads including 11 spousal couples Stage of dementia not specified UK	Reminiscence therapy using an iPAD. Aim was to facilitate communication. Same intervention together	Post-intervention Qualitative analysis of interviews, caregivers and care-receivers interviewed separately. Interview questions and method of analysis (thematic analysis) specified. No follow-up	implementing new activities and strategies at home. Enjoyable activity. Caregivers – awareness of capabilities of care-receiver; feeling closer to care-receiver. Care-receivers – feeling they have been more open with one another, feeling caregiver is more understanding. Relational improvements: Enjoyment; appraisals of other person; emotional Connection Limitations: Distress created by difficult memories.

(continued)

Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Clark et al. (2021) Creative	10 dyads including 8 spousal couples Mild, moderate and severe dementia	Group-based activity, facilitated by music therapist and focused on creating songs. Aim was to provide experiences of enjoyment, togetherness, and connection. Same intervention together	Post-intervention Qualitative analysis of interviews. Interview questions and method of analysis (interpretative phenomenological analysis) specified. No follow-up	Enjoyable time doing something together and interacting: highlighted skills, including those of care-receivers. Relational improvements: Enjoyment; meaningful interaction; appraisals of other person
Couture et al. (2020) Creative	Australia 5 couples Stage of dementia not specified Canada	Sessions facilitated by art therapist, involving Post-intervention art activities based on the events and Logbook kept concerns of the couple over the previous therapist, and in week. Intervention. In Aim was based on idea that sharing specified; and u difficult emotions through artistic data collection expression allows spouses to develop format. System intimacy and to transform relational No follow-up Same intervention together	Post-intervention Logbook kept by participants, notes by therapist, and interview 2–3 weeks post- intervention. Interview questions not specified; and unclear if other methods of data collection followed a structured format. Systematic method of analysis referenced but not described. No follow-up	Enjoyable activity; talking more; in one case, made caregiver more aware of limitations of care-receiver but in a context that made them more empathic about those limitations Relational improvements: Communication; emotional connection; enjoyment

Table 3. (continued)	ued)			
Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Dassa et al. (2020) Creative	2 couples Stage of dementia not Israel Israel	Sessions facilitated by music therapist, involving for example, dancing playing instruments, listening to music. Aim was to help couple communicate, enjoy time with each other, and promote co-operation on the part of the care- receiver. Same intervention together and separately	Post-intervention Summaries of therapy sessions; phone discussion of therapy; and therapist's log of sessions. Questions for phone conversation specified, but unclear if other data collection methods followed a structured format. Systematic method of analysis referenced but lacking in detail. Follow-up phone conversation at 4 weeks. Some findings reported separately	Enjoyment from joint activity, experiencing intimacy; improved communication; reduced conflict when music used in daily activities; strengthened identity of care- receiver by connecting with their past self, strengthened relationship by connecting with its past form and escaping from caregiver- care-receiver relationship. Follow-up: Care-receiver had been in hospital and music had been used by caregiver to facilitate co-operation with medical staff.
Dupuis & Pedlar (1995) Creative	4 dyads including I spousal couple Stage of dementia not specified Canada	Researcher-facilitated music sessions, with a focus on using music to cue reminiscence; delivered to all participants as one group. Care-receivers all living in residential care. Aim was to facilitate communication, bring dyad closer, and reduce the distress and frustration associated with visits to the care-receiver in care. Same intervention together	Post-intervention. Part of a wider RCT study, but focus of this study only on one group Qualitative analysis of systematic logged observations made during sessions, open- ended questions for caregiver, and a follow-up interview with caregiver, and method of analysis (grounded theory), specified. Follow-up: Interviews only took place 6 weeks after intervention because authors were interested in sustained impact of the intervention. However, follow-up findings not reported separately from other data.	Relational improvements: Enjoyment; emotional connection; communication; reduced conflict; appraisals of other person; appraisals of relationship Improved communication; seeing care- receiver in a new, more positive way, appreciating their preserved capabilities and experiencing them as closer to what they used to be. Relational improvements: Communication; appraisals of other person

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Table 3. (continued)	ued)			
Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Hamill et al. (2012) Creative	3 dyads including 2 spousal couples Mild, moderate and severe dementia UK	Therapist-facilitated circle-dancing done as a group. Aim was to improve relationship, but no further explanation. Same intervention together	Post-intervention 'Progress sheets' completed by therapist at the end of each session; following completion of programme, participants interviewed about their experience. Unclear if progress sheets followed structured format and interview questions not specified. No followed	Appreciating the residual strengths and individual personality of the care- receiver; improved communication (including outside the sessions); emotional connection. Relational improvements: Communication; emotional connection; appraisals of other person
Melhuish et al. (2019) Creative	I 4 couples Stage of dementia not specified UK	Music therapy for each couple separately, facilitated by a therapist, involving activities such as listening to familiar music and improvising with instruments. Aim was based on prior evidence that music therapy can create a greater sense of connection. Same intervention together	Post-intervention Unvalidated scales completed by therapist about the care-receiver – assessing, amongst other things, whether relating to others improved during each session. No Statistical analysis. Open-ended questions to caregiver about impact of the therapy, given 2 weeks post-intervention. Content of questions, but not method of analysis, specified. Therapist notes – structure and method of analysis not specified. No follow-up of evaluations concerning	Scales: Relating to others improved in 60% of sessions (and so failed to improve in 40% of sessions). Other: Enjoyment; sessions increased communication and affection from the care-receiver. Relational improvements: Communication; emotional connection; enjoyment
Unadkat et al. (2017) Creative	17 couples Mild, moderate and severe dementia UK	Participants were drawn from a range of existing singing groups, some ongoing and some time-limited. Aim was to enhance connection and togetherness, with idea that this would help preserve their identity as a couple. Same intervention together	Post-intervention Post-intervention Qualitative analysis of interviews, both members of the couple together. Interview questions and method of analysis (grounded theory) specified. No follow-up	Enjoyment; appreciation of skills retained by care-receiver; appreciation of identity separate from the diagnosis; sense of togetherness and emotional connection; affirmation that a person with severe dementia is 'still there'. Relational improvements: Enjoyment; emotional connection; appraisals of other person

Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Bourgeois (1992) Communication	6 dyads including I spousal couple Severe dementia USA	Using memory wallets with written and pictorial stimuli to prompt conversation. Aim was to promote communication between the couple. Caregiver trained to deliver intervention to care-receiver	Pre-post-intervention, multiple baseline single-case design Quantitative coding of recordings of conversation, without (pre) and with (post) the wallet. No statistical analysis. Satisfaction rating scale about the intervention. Content not specified. No statistical analysis. Open-ended questions about wallet use. Content of questions and analysis not specified. Follow-up: Coding repeated for two	Recordings: Increase in on-topic and novel communications, decrease in non- communicative, repetitive and ambiguous utterances. Follow-up: Some of these benefits maintained at follow-up, relative to the baseline. Satisfaction rating scales: No quantitative data provided. Open questions: Improvement in everyday conversation in some cases. Relational improvements:
Ekström et al.	l couple Stage	Tablet device to support communication	findings reported separately Post-intervention only, case studies	Limitations: Intervention terminated early in two cases due to frustration of the caring spouse in trying to train their partner. Recordings: Couples talked for longer using
(2017) Communication			Quantitative coding of recorded conversations, without (pre) and with (post) the device. No statistical analysis. Interview about experience of using the device. Interview questions and method of analysis not specified. No follow-up	the device, and this increase was not due entirely to talk about the device. Number of communication initiations made by care-receiver did not increase. Interviews: Device easy to use and stimulated conversation. Relational improvements: Communication (partial support only - no statistical analysis) Limitations: Device may have increased focus on dementia.

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Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Karlsson et al. (2014) Communication	7 dyads including 6 spousal couples Mild and moderate dementia Sweden	Jointly using a camera and a digital photographic diary to stimulate recollection and conversation about daily life. Aim was to promote communication between the couple. Same intervention together	Post-intervention only Interviews and researchers' post-session notes about use of diary. Interview questions and method of analysis (content analysis) specified. Unclear if researcher notes followed a structured format. Follow-up: Interviews repeated at 20–22 weeks	Interviews and notes: Helped to facilitate conversation about both the photos and broader topics. Relational improvements: Communication Limitations: Some caregivers struggled to see the benefits of the diary resulting in sporadic use
Nordheim et al. (2019) Communication	108 couples Mild and moderate dementia Germany	Intervention included numerous components not directed at the relationship, but one component addressed communication training. Aim was to promote communication between the couple. Same intervention together	RCT – treatment group compared with standard care group. Both members of the couple completed dyadic coping inventory (measuring mutual support) and via analogue scales of 'relationship equity and quality'. Statistical analysis completed. Follow-up: Measures repeated at 6 months and findinsr reported separately.	No effect of the intervention on the questionnaire or the analogue scales, either immediately or at follow-up. Relational improvements: No significant effect
Olthof-Nefkens et al. (2018) Communication	4 couples Stage of dementia not specified Netherlands	Programme of sessions delivered by a speech therapist to enhance communication. Aim was to promote communication between the couple. Same intervention together	Post-intervention only Interviews about experience of interviews and tecordings of therapy sessions. Interview questions and analysis (framework analysis) specified. No follow-up	Interviews and recordings: Improved communication; better understanding of why the care receiver may require a different communicative approach; able to discuss their situation more openly. Relational improvements: Communication; appraisals of other person

Table 3. (continued)

Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Quayhagen et al. (2000) Communication	21 couples Mild and moderate dementia USA	One treatment group received a cognitive stimulation programme, one aspect of which focused on improving the conversational skills of the care-receiver. Aim was to promote communication between the couple. Caregiver trained to deliver intervention to care-receiver	RCT – four treatment groups plus wait-list Mean questionnaire scores showed slight control group also showed control group also showed satisfaction scale, measuring degree of a slightly greater decline over same satisfaction in varies of the communication endorsed by 80% of relationship. No statistical analysis. Corrent of questions about the intervention. Corrent of questions and method of analysis ('open-coded' technique) specified. Percentage of caregivers who addressed each identified theme was then calculated. No follow-up	Mean questionnaire scores showed slight decline, but control group also showed a slightly greater decline over same period. Open questions: Enhanced communication endorsed by 80% of caregivers in the group. Relational improvements: Communication
Quayhagen et al. (2000) (Same study as previous entry) Communication	22 couples Mild and moderate dementia USA	One treatment group took part in discussion groups, some of which were for both members of the couple and some for one member. Wide range of topics discussed, one of which was 'social and family relationships'. Aim was to enhance communication about between the couple about these topics. Same intervention together and separately	RCT – four treatment groups plus wait-list Mean questionnaire scores showed very control control group also caregivers completed marital needs slight decline, but control group also caregivers completed marital needs satisfaction scale, measuring degree of showed a slightly greater decline over satisfaction in various aspects of the satisfaction in various aspects of the relationship. No statistical analysis. Communication endorsed by 50% of caregivers responded to open-ended to open-ended to uncertain degree of support because of caregivers who addressed each identified theme was then calculated. No follow-up	Mean questionnaire scores showed very slight decline, but control group also showed a slightly greater decline over same period. Open questions: Enhanced communication endorsed by 50% of caregivers in the group. Relational improvements: Communication; (relationship satisfaction uncertain degree of support because no statistical analysis)

Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Quayhagen & Quayhagen (2001) Communication	56 couples Stage of dementia not USA USA	Caregivers trained to provide activity sessions focused on problem-solving, memory, and communication skills. Aim was to promote communication between the couple. Caregiver trained to deliver intervention to care-receiver	RCT – wair-list, placebo (passive activities together, such as watching TV), and intervention group. Two studies, with intervention in second study being shorter and focused on each of the three areas in each session. Placebo not included in study 2. Marital needs satisfaction scale completed by caregiver. Statistical analysis completed by caregiver. Statistical analysis completed by caregiver. Unclear if these followed a structured format and method of analysis not specified.	Questionnaire: Intervention group showed significantly less decline than wait-list group in study 1 but not in study 2. In study 1, intervention group not significantly better than placebo group. Logs: 'Improvement in the spousal interaction' reported for study 1, and 71% reported 'enhanced communication and interaction' in study 2. Relational improvements: Communication, (relationship satisfaction - inconsistent findings)
Troche et al. (2019) Communication	4 couples Mild and moderate dementia USA	Caregivers trained to use strategies that improve conversation of care-receiver. Aim was to promote communication between the couple. Caregiver trained to deliver intervention to care-receiver	No rollow-up Pre-post-intervention Quantitative coding of conversations (content of which was cued by researchers) in terms of caregiver use of taught strategies and contribution to conversation of care- receiver. No statistical analysis. Rating of satisfaction with intervention, plus open-ended questions about it, completed by caregiver. Content of questions specified but not method of analysis. No follow-up	Coding. In all 4 dyads, there was an increase in caregiver use of strategies and an increase in contribution made by care- receiver. Ratings and questions: All rated intervention as beneficial. Some suggested that training needed to be longer with videos to show use of strategies. Relational improvements: Communication

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Table 3. (continued)	led)			
Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Williams et al. (2018) USA Communication	I 5 couples Mild and moderate dementia USA	Care-receivers seen individually for support from researcher in expressing self. Caregivers then received training on strategies to improve communication. Both members of couple then practised in presence of researcher. Aim was to promote communication between the couple. Same intervention together and separately	Pre-post-intervention Quantitative coding of conversations at end of session, in terms of whether caregiver implemented taught strategies, and the social and unsociable contributions of the care-receiver. Statistical analysis completed Interview of caregivers about experience of intervention. Systematic qualitative method of analysis specified, but not interview questions. No follow-up	Coding: Controlling for the cognitive status of the care-receiver, both the ratio of facilitative to non-facilitative communicative behaviours by caregivers, and the ratio of social to unsociable communications by the care-receiver, increased significantly across sessions. Benefits were reduced when the care- receiver was more cognitively impaired, Interviews: Intervention was useful and enjoyable; better understanding of communication needs of care-receiver. Relational improvements: Communication; enjoyment; appraisals of other person Limitations: Some caregivers reported they did not need to change their communication style; some were disheartened by partner's unresponsiveness to intervention; some found practising between sessions burdensome.
Williams et al. (2021) Communication	Same study as Williams et al. (2018)	Same study as Williams et al. (2018) Same intervention together and separately	Pre-post-intervention Quantitative coding of video-recorded sessions of conversations at end of session, in terms of misunderstandings and their successful resolution, and the number of words spoken by each person. Partial statistical analysis completed. No follow-up	Coding: Misunderstandings did not reduce, but there was a significant increase across sessions in their resolution. Contrary to expectation, the number of words spoken by the caregiver increased and number spoken by care-receiver decreased across sessions, but no statistical analysis of this provided. Relational improvements: Communication (only partial support because of inconsistency in findings)

Participants, stage of dementia, and location 30 couples Mild dementia USA Number not	Nature of intervention, aim that was relevant to relationship, and how the couple were involved As for epstein et al. (see below) but with additional elements of Gestalt Therapy and Transactional analysis. Aim was to identify what challenges dementia was presenting to the relationship and how couples were		
30 couples As Mild dementia USA USA Number not Ps		Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Number not Ps	coping with these; to encourage mutual expression of their feelings about these issue to one another; and to promote more effective coping	See epstein et al. Below No follow-up	Caregiver develops better understanding of other's behaviour and of the impact of the dementia, leading to greater acceptance and less resentment and reduced conflict; increased collaboration in addressing the challenges of their situation. Results from questionnaire not reported. Relational improvements: Appraisals of other person: reduced conflict; reduced negative feelings; mutual support
(2014) specified using Psychottherapy Stage of reflected terflected contraction on to contracted care- ult ult resilication communication communication contracted care- ult communication communicati	r, including eractions to giver to sieties of the acing the ing and ing and	Post-intervention Description of the approach, with one detailed case study and other examples. Unclear if data were collected following a structured format, and method of analysis not specified. No follow-up	Caregivers better enabled to contain the anxieties and distress of the care-receiver through a better understanding of their reactions; more tolerant and less frustrated by challenging behaviours; care-receiver more engaged in meaningful interaction; couple in more emotional contact with one another. Relational improvements: Appraisals of other person, reduced negative feelings; reduced conflict, meaningful interaction; emotional connection

Study and				
type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Epstein et al. (2007) Psychotherapy	10 couples Mild dementia USA	Relationship counselling incorporating 'elements of cognitive behavior therapy, psychodynamic And short-term supportive therapies'. For aim, see entry for Auclair et al. (2009). Same intervention together	Pre-post-intervention. Part of a larger RCT, but findings for control group are not provided. Post-intervention interviews. Interview questions and method of analysis not specified. Both members of the couple complete the dyadic Adjustment scale (which assesses conflict/harmony, satisfaction, communication, and meaningful interraction) before and after the intervention. No follow-up	Findings relate partly to description of two case studies and partly to summary of post-intervention interviews. More understanding and tolerance of how the other person is dealing with the difficulties they face; reducing the need to control the other person; reaffirmed sense of togethernes; communicating their feelings to one another; previous patterns of positive interaction were re- established. Results from questionnaire not reported. Relational improvements: Communication; appraisals of other
Quayhagen et al. (2000) Same study as Quayhagen et al. (2000) entries under communication Psychotherapy	29 couples Mild and moderate USA USA	One treatment group received cognitive- behavioural therapy. Aim was to identify and resolve issues within the relationship, to improve conflict resolution, and to enhance communication Same intervention together	RCT – four treatment groups plus wait-list control Caregivers completed marital needs satisfaction in scale, measuring degree of satisfaction in various aspects of the relationship. No statistical analysis. Caregivers responded to open-ended questions about the intervention. Caregivers responded to open-ended questions about the intervention. Content of questions and method of analysis ('open-coded' technique) specified. Percentage of caregivers who addressed each identified theme was then calculated. No follow-un	reduced conflict, mutual support; equality Questionnaire: Very small increase in score post-intervention, but control group did show decline over same period. Open questions: Open questions: Enhanced communication endorsed by 92% of caregivers in the group. Relational improvements: Communication; (relationship satisfaction - uncertain degree of support because no statistical analysis)

20

Dementia 0(0)

Study and type of intervention n	Participants, stage of dementia, and location	Nature of intervention, aim that was relevant to relationship, and how the couple were involved	Design, Methodology, and Follow-up	Stu Relationship Outcomes and Limitationsdy and type of intervention
Bielsten et al. (2020) Miscellaneous	6 couples Stage of dementia not Sweden	A problem-solving app for home use. Video clips introduce different topics, and suggestions are made about specific activities that address goals relating to the topics. Aim was to help couples focus on what they can still do together, to reflect on their strengths as a couple. Same intervention together	Post-intervention Qualitative analysis of interviews about experience of intervention and impact on relationship. Interview questions and method of analysis (thematic analysis) specified. No follow-up	Greater equality and balance in relationship; Realising need for co-operation and mutual support; feeling closer to one another; facilitated openness and communication, and this allowed the couple to deal more effectively with their frustrations with each other. Relational improvements: Equality; appraisals of relationship; mutual support; emotional connection; communication: Reduced parative fealings
Chung (2001) Miscellaneous	4 dyads including 2 spousal couples Mild dementia China	Group activities included psychosocial education and co-operating on tasks (e.g. crafts). Separate carer group for more education and peer support. Aim was to promote an intimate caring relationship. Same intervention together and separately	Post-intervention Notes taken by observer during group sessions and interviews about experience of the interview questions not specified and unclear if notes followed a structured format. Method of analysis ('content analysis') lacked detail for interviews and was unspecified for observer notes. No following	Feeling closer; communicating more effectively. Relational improvements: Communication; emotional connection
Hill et al. (2020) Miscellaneous	3 couples Stage of dementia not specified Australia	Group activities such as doing movement exercises together, talking about photos of their past, reflecting on their past Aims – to create space for couple to be husband and wife rather than caregiver and care-receiver, to support the couple to address the challenges of their situation as a unit; to reaffirm the bonds of commitment to one another. Same intervention together	Pre-post-intervention Pre-post-intervention Questions to couples before and after the intervention, and a discussion based on photos taken during the sessions. Questions not specified and unclear if discussion followed a structured format. Method of analysis unspecified. Follow-up: Participants met up as a group at 1-month post intervention, but unclear whether any data collected. Findings not reported separately.	Better appreciation of one another. Relational improvements: Emotional connection

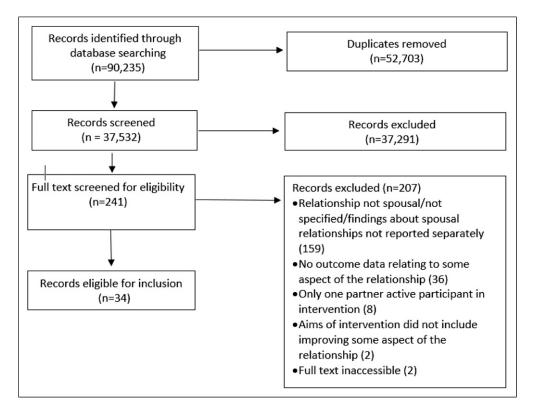


Figure 1. Prisma chart showing selection strategy.

case study that was described in the study by Kindell et al. (2018). Again, these papers are entered separately in Table 3. Thus, there were 34 papers, 36 entries in Table 3, but only 32 studies. Table 3 provides the following information about each of the included studies:

- The type of intervention.
- The number of participants.
- The stage of dementia they had reached and the location of the study.
- A description of the intervention, the aims of the intervention that addressed the relationship, and how it involved the couple (i.e. whether it was delivered to both together, separately etc.).
- The design and methodology of the study, including whether there was any follow-up assessment of outcome and whether the outcome of the follow-up was reported separately in the findings section.
- The outcomes concerning the relationship, including whether any limitations to the intervention had been noted in the paper.

Only those aspects of the study that were relevant to the aims of this review are included in the table (e.g. there is no information about aims not directly related to the couple relationship, and no details about outcome measures unrelated to the relationship or associated findings). Papers are grouped in Table 3 according to the type of intervention they evaluated.

Participants

Fifteen of the 32 studies failed to report on the stage of the dementia process reached by the care-receiver (defined in terms of scores on the Mini-Mental State Examination or an equivalent). In the remaining studies, the full range was represented, from severe to mild, but those with severe dementia were participants in only five studies. Unsurprisingly, the studies that provided some form of verbal psychotherapy did not involve people with severe dementia. Most of the studies were conducted in North America or Europe, with the remaining being from Australia (3), South Korea (2), China (1) and Japan (1).

Interventions

A wide range of interventions were evaluated in the included studies. To summarise these, they were divided into several broad categories based on their central therapeutic element:

- Narrative (10 entries in Table 3): The primary aim of these interventions was to guide couples to reflect on their life together through reminiscing about the past or through creating a story of their life together.
- Creative (8 entries): These interventions involved some form of imaginative, expressive, or artistic activity, such as painting, dancing, or singing.
- Communication (11 entries): The aim of these interventions was to improve communication between the couple. Some of them focused on developing communication skills, but others were focused on the use of aids to facilitate conversation, such as a digital camera that recorded events of the day and thereby enabled conversation about those events (Karlsson et al., 2014).
- Psychotherapy (4 entries): These interventions were based on the application of established psychotherapeutic approaches to identify and resolve issues that challenged the relationship. The approaches included counselling psychology, cognitive-behaviour therapy, and a psychoanalytic couples therapy. Two of the studies were linked, in that one was a pilot for the other (specifically, Epstein et al., 2007 was a pilot for Auclair et al., 2009).
- Miscellaneous (3 entries): It was difficult to classify these studies under any of the above categories, either because they used several different components and no component appeared to be the central therapeutic component (e.g. Chung, 2001), or because the intervention was not similar to that used in any of the other studies (e.g. Bielsten et al., 2020).

These categorisations are somewhat artificial because there was often an overlap. For example, the creative interventions frequently involved some element of reminiscence, such as singing songs that had personal meaning (Unadkat et al., 2017); and the *Couples Life Story Approach* that was used in several studies classed as *narrative* also involves teaching communication skills.

Although all the studies aimed to improve the relationship and reported relational outcomes (as per the inclusion criteria), enhancing aspects of the relationship was not the exclusive aim of many of the interventions. For example, the intervention described by Nordheim et al. (2019) also aimed to maintain the independence of the care-receiver and the mental wellbeing of the couple through interventions such as relaxation exercises and adaptations to the home environment.

Perhaps due in part to the fact that enhancing the relationship was not the exclusive or primary aim of some of the studies, many of them did not provide a detailed theoretical rationale for how the intervention could be expected to benefit the relationship. For example, Melhuish et al. (2019) discussed the potential benefits of music therapy in dementia, but the benefit for the relationship was only one of several benefits listed and was not considered in detail. Some studies, however, stated the

supposed benefits for the relationship without any account of how the intervention might bring about these benefits (e.g. Chung et al., 2021; Hamill et al., 2012; Sweeney et al., 2021). Others did provide a more detailed rationale (e.g. Balfour, 2014; Clark et al., 2021, Ingersoll et al., 2013). However, even in these more detailed accounts, there were often some gaps. For example, Ingersoll-Dayton et al. (2013) in their account of the *Couples Life Story Approach* state that one of the aims of the approach is to highlight the adaptability and resilience of the couple in their past lives together, but they do not explain the value of doing this.

In 26 of the 36 table entries, both members of the couple took part in the same intervention together. Five entries involved training the caregiver to engage in the therapeutic activities with the care-receiver, while the remaining five entries involved the couple receiving some components of the intervention together, but some separately.

Study design and methodology

In terms of study design, only three of the 32 studies were randomized controlled trials. Nine studies did not have a control group but took measures before and after the intervention (labelled in Table 3 as 'pre-post-intervention'). The remaining 20 studies had no control group and only took post-intervention measures. Uncontrolled studies, particularly those that do not take any pre-intervention measures, do not provide a firm basis for drawing conclusions about the effectiveness of an intervention.

A range of data collection methods were used. Quantitative methods primarily involved the use of questionnaires, but some studies used quantitative coding of recorded interactions between the couple (e.g. Williams, et al., 2018). In most cases, the questionnaires were established measures of satisfactory reliability and validity, but in a few cases questionnaires or rating scales with untested psychometric properties were used (e.g. Melhuish et al., 2019). Qualitative methods primarily involved interviews or open-ended questions, but data was also gathered from notes taken by the therapist or an observer during the session; notes completed by the therapist after the session; team discussions; recordings of the couple interacting with one another; and diaries and logs kept by the caregiver. Quantitative methods were used in the minority of studies (11 in total).

Apart from four studies that quantitatively evaluated recorded interactions between the couple, and two studies that logged observations made during session, all the other studies relied on self-report, either from the therapist or the participants. Self-report is more prone to bias.

The description of qualitative methods often lacked sufficient detail. Some studies that used interviews or open-ended questions did not provide any information about what questions were asked (e.g. Ekström et al., 2017). For other methods of collecting qualitative data (e.g. caregiver diaries, therapist notes, observations), it was often not specified whether these followed a structured format or it was left to the person completing them to decide what was worth recording (e.g. Karlsson et al., 2014). Unsystematic data collection is also prone to bias.

In terms of analysis, of the 11 studies that used quantitative methods, five provided only descriptive statistics and did not analyse the data (e.g. Ekstrom et al., 2017) and two (Bourgeois, 1992; Epstein et al., 2007) failed to report the data from questionnaires they had used. Failing to complete statistical analysis means that it was not possible to eliminate the explanation that any changes were due to chance. Numerous qualitative studies failed to indicate whether the data were analysed using a systematic method such as conversational analysis or grounded theory. Not using systematic methods of data analysis places the findings of these studies at risk of researcher bias.

Finally, only three studies collected follow-up data in a systematic manner, with a further four studies reporting a follow-up but failing to state whether the data were collected in a systematic

manner. In three of these seven studies (Dassa, 2018; Dupuis & Pedlar, 1995; Hill et al., 2020), findings from the follow-up were not reported separately from the main findings and so it was not possible to determine what information was obtained at follow-up.

Relational outcomes

In terms of the reported benefits for the relationship, a different picture emerged from the qualitative and quantitative studies. Whereas all the studies using a qualitative approach reported benefits for at least some participants, quantitative methods provided mixed evidence of benefit.

Eight studies used questionnaires to evaluate outcome. Two of these (Bourgeois, 1992; Epstein et al., 2007) failed to report the outcome data and three provided only descriptive statistics (Baker et al., 2012; Melhuish et al., 2019; Quayhagen et al., 2000). These descriptive statistics provided no convincing evidence that the intervention had been beneficial (see Table 3). Two of the remaining three papers reported that the intervention did not have a statistically significant impact (Ha et al., 2021; Nordheim et al., 2019). The remaining paper (Quayhagen & Quayhagen, 2001) provided inconsistent evidence. The intervention group showed significantly less decline than a waiting list control in the first study, but not in the second study; and, in the first study, there was no significant benefit relative to a placebo group, suggesting that any benefit may not have been due to the specific nature of the intervention. The three randomised controlled trials included in this review are all among these papers that used questionnaires (Nordheim et al., 2019; Quayhagen et al., 2000; Quayhagen & Quayhagen, 2001). There was therefore no quantitative evidence from these trials that the interventions had any specific therapeutic effect.

Four studies extracted quantitative data from recorded interactions between the couples. This method provided some evidence of benefit. Three of the studies reported improvements, but did not statistically analyse the data (Bourgeois, 1992; Ekstrom et al., 2017; Troche et al., 2019). Williams et al. (2018) reported statistically significant improvements in communication across sessions (apart from those living with more severe dementia) and, in an analysis of different findings from the same study, Williams et al. (2021) also reported significant improvements in some aspects of communication, but other aspects appeared to deteriorate.

The relational outcome data collected using qualitative methods primarily came from participants reporting on their experience of the therapy sessions, therapists reporting on progress in the sessions, or recorded conversations between the couple that were set up as part of the study. Consequently, most of the evidence relates to benefits occurring within the therapy sessions themselves and there was relatively less information about what impact the intervention may have had on the lives of the participants outside the sessions. Some studies did ask participants about the broader impact of the intervention (e.g. Bourgeois, 1992; Dupuis & Pedlar, 1995; Kwak et al., 2018), although it is difficult to determine how many did this because of the failure of numerous studies to specify what questions had been asked (see Table 3). For example, the interview described by Kwak et al. (2018) (who used the *Couples Life Story Approach*) included questions about participants' intentions to use the life story book after the intervention had ended and their ongoing use of the communication advice they had been given.

Related to the lack of information about the impact on everyday life, there is even less evidence about long-term benefits. As noted earlier, only four studies reported follow-up data separately from post-intervention data. Two of these did not collect the data in a systematic way and reported longer-term benefits (Dassa et al., 2020; Kindell et al., 2018). Two collected the data systematically and one found longer-term benefit (Bourgeois, 1992) but the other did not (Nordheim et al., 2019).

To summarise the benefits reported by the studies, a list of potential topics was made from the research described in the Introduction about the relationship changes that occur after dementia and from the constructs measured by the relationship questionnaires, that were used to guide the selection of studies. Each finding for each paper was then allocated to one of these topics. If the finding did not fit an existing topic, then a new topic was created; and the label of some of the topics was changed to better reflect the benefits reported. This resulted in the following categories of benefits that were reported or observed for some participants:

- Enjoyment: Participants reported that the intervention provided the opportunity for the couple to enjoy one another's company by taking part in the activities associated with the intervention.
- Meaningful interaction: Related to this, participants reported that the activity provided an opportunity to connect and relate to one another in a meaningful way, something which could otherwise be relatively absent from their lives together.
- Communication: The skills of the caregiver in managing communicative interactions with the care-receiver were improved. The contribution of the care-receiver to conversations was increased, as was the length of those conversations. Some interventions also facilitated communication with one other about thoughts and feelings relating to the other and to their situation.
- Emotional connection: Some interventions created an emotional connection between the couple, allowing them to feel greater intimacy, affection, and closeness to one another. Associated with greater understanding (see below), participants could also feel more compassion and empathy for their partner. Interventions involving life review could create a sense of gratitude for the other person and their life together.
- Reduced negative feelings: Conversely, greater understanding could reduce feelings of resentment and blame that the caregiver felt towards the care-receiver.
- Reduced conflict: Interventions that increased the caregiver's understanding could also reduce conflict in the relationship, as could interventions focused on reducing anxiety and improving mental wellbeing.
- Mutual support: Some interventions allowed couples to be more supportive of one another, increasing their collaboration in facing the challenges of living with dementia and their sense of togetherness.
- Appraisals of other person: Interventions could provide the caregiver a better understanding of the communication needs of the care-receiver, their emotions and their behaviour leading to reduced conflict and negative feelings, and greater empathy. Interventions could also help the caregiver appreciate the residual strengths and abilities of the care-receiver. This could enhance the sense that they have an identity separate from the dementia, and help strengthen the relationship by helping the caregiver appreciate that the care-receiver was still the same person.
- Appraisals of the relationship: Similarly, interventions could strengthen the relationship by reconnecting with its past form and escaping from the caregiver and care-receiver dynamic. They could also help participants appreciate their strength and resilience as a couple.
- Equality: Associated with appraisals of the other person and the relationship, some studies reported a greater balance and equity in the relationship. Working together on an activity that revealed residual strengths in the care-receiver meant that the relationship felt more equal. In one study, a caregiver reported feeling a reduced need to control their partner.

Table 3 shows which of these outcomes were reported by each study. As an aid to appreciating the frequency of these outcomes, they are depicted as a word cloud in Figure 2, which was generated using online software (https://www.freewordcloudgenerator.com/). To construct this, a frequency

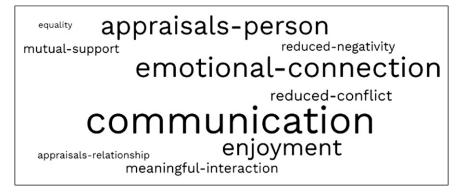


Figure 2. Word cloud depicting frequency of reported relational benefits.

count of the relational outcomes was conducted based on the entries in Table 3. The word cloud presents more frequently identified outcomes in larger font, and those less frequently identified in smaller font.

Some of the studies highlighted possible limitations and challenges to using the interventions (Table 3). Reminiscence and life review may be upsetting at times because it can serve as a reminder of what the care-receiver has lost (including not being able to recall significant events from their past) and how the relationship has changed. Some participants highlighted the burden of attending intervention sessions and being asked to do intervention-related activities at home. Frustration and conflict could also occur when the care-receiver was unwilling to participate or unresponsive to the efforts of the caregiver to implement the intervention.

Discussion

Improving the quality of research

It is difficult to draw any firm conclusions about the benefits of these interventions for the couple relationship because of the poor quality of the evidence. Although exploratory studies serve a useful purpose, the commissioning of services to provide interventions of this nature relies on a strong evidence base. The methods of data collection and analysis need to be more systematic. For example, studies that ask participants about their experience of the intervention need to follow a set interview schedule and the data need to be analysed using an appropriate qualitative methodology. More studies are needed that use control groups. Control groups are particularly important in this area of research because of the need to take account of decline in the variables of interest due to the advance of the dementia. For example, Quayhagen et al. (2000) reported a pre-post intervention decline in scores on a measure of marital satisfaction for their treatment groups, but an even greater decline for their control group (although this was not statistically analysed). A pre-post intervention design without a control group would have suggested that the intervention was ineffective. Self-report measures need to be supplemented by more objective evaluations to avoid the bias associated with self-report. A promising example of such evaluation is the quantitative analysis of recorded interactions between the couple described by some of the reviewed studies (Bourgeois, 1992; Ekstrom et al., 2017; Troche et al., 2019; Williams et al., 2018).

Future studies also need to explore more rigorously the wider impact of the intervention. Much of the focus of the reviewed studies was on the benefits occurring within the session. There was less investigation of whether it benefited the everyday life of the participants beyond the session, and whether the benefits were sustained over time. This is not to suggest that within-session benefits are not valuable. There is intrinsic worth, for example, in the opportunities for meaningful interaction and emotional connection within the session afforded by creative interventions such as music therapy (e.g. Dassa et al., 2020). Nevertheless, the case for commissioning these interventions within resource-limited services would be strengthened by evidence that there are long-term carry-over effects to everyday life. Control groups are again an important consideration when exploring long-term effectiveness to account for deterioration due to the dementia.

It is worth considering that when the research employed control groups (i.e. the three randomised controlled trials) and when it used standardised measures that addressed the wider impact of the intervention (i.e. the eight studies that used standardised questionnaires about the relationship), there was no quantitative evidence that the interventions were effective. It would be premature to conclude from this that the interventions were, indeed, ineffective or that any benefits were entirely withinsession. The three randomised controlled trials all used standardised questionnaires to measure the outcome, but, in all three cases, it is questionable whether the questionnaires would have been sensitive to any relational benefits that occurred. Thus, the component of the intervention described by Nordheim et al. (2019) that was relevant to the relationship was communication training, but the questionnaire measured mutual support. Quayhagen and Quayhagen (2001) provided communication skills, but the questionnaire evaluated marital satisfaction. The different treatment groups in Quayhagen et al. (2000) received training in conversational skills, a discussion about family and social relationships, and cognitive behaviour therapy. The sensitivity of the marital satisfaction questionnaire they used to changes brought about by these interventions is questionable. Similar concerns can be raised about other studies that used questionnaires. For example, in the study by Baker et al. (2012) it is not clear questionnaires measuring the provision of mutual support and the benefits experienced by the caregiver from their caring role were an effective way of measuring the effects of music therapy. Future research needs to use quantitative outcome measures that will be sensitive to any changes brought about by the intervention. For example, quantitative coding of recorded couple interactions is likely to be sensitive to the benefits of communication training. Indeed, all five studies that used this method reported some benefits (Bourgeois, 1992; Ekstrom et al., 2017; Troche et al., 2019; Williams et al., 2018; Williams et al., 2021), although these were uncontrolled studies.

An appropriate overall conclusion about the effectiveness of the interventions reviewed in this paper is that they show promise, but they need to be more rigorously tested before they can be recommended for use in resource-limited services.

Embracing diversity

A positive aspect of the reviewed studies is the breadth of the interventions employed. They included different kinds of life review and reminiscence, a wide range of creative activities, verbal psychotherapies, and interventions directed at developing communication skills or using various aids to facilitate communication. As will be apparent from Table 3, there was some considerable overlap in terms of the potential relational benefits from these different kinds of intervention. For example, benefits in terms of *Communication* were reported for the narrative, creative and psychotherapy interventions as well as those that specifically focused on communication. This diversity in the interventions and the diversity in how relational outcomes can be achieved are valuable because they

provide the opportunity to match an intervention to the needs, preferences, and abilities of the couple. For example, creative interventions enabled the involvement of couples living with severe dementia (Clark et al., 2021; Hamill et al., 2012; Unadkat et al., 2017). Future research should embrace this diversity and aim to ensure that, for each particular relational need, there is a range of interventions available.

As part of this future diversity, there needs to be more investigation of the use of verbal psychotherapies that have been implemented to improve relationships in the general population. The small number of studies that evaluated their use (four – see Table 3) is surprising given that such therapies have been reported to be effective in improving the relationships of those living with other kinds of neurodegenerative disease (e.g. Beasley & Ager, 2019; Ghedin et al., 2017). Unwarranted assumptions about lack of insight, understanding and reasoning on the part of the person with dementia may have contributed to this lack of interest. More recent studies indicate that many people in the earlier stages of dementia are aware of changes within their relationship (Alsawy et al., 2020; Clark et al., 2019; Harris, 2009; Wawrziczny et al., 2016).

Developing the theoretical rationale for interventions

Some of the reviewed studies did not provide a detailed account of the processes whereby the intervention was expected to benefit the relationship. To advance the development of interventions that support the relationship, and to understand for whom and in what circumstances they are effective, a more comprehensive understanding is needed of their mechanism of effect. In large part, this could be achieved by a closer connection with the research on the impact of dementia on the relationship that was summarised briefly in the Introduction. Taking into consideration what effects the dementia has had on the relationship could help to shape existing interventions and to suggest new developments or new interventions. Two examples are given to illustrate this possibility.

Some qualitative research on the experience of the person with dementia suggests that they can feel side-lined and ignored as the caregiver takes over, leading to some resentment of the caregiver (e.g. Clare & Shakespeare, 2004; Svanström & Dahlberg, 2004). Two of the reviewed papers mentioned greater balance and equity in the relationship as a product of the intervention. Epstein et al. (2007) evaluated the benefits of psychotherapy and noted that, as a result of the therapy, one of the caregivers felt less need to control the life of the care-receiver. In the study by Bielsten et al. (2020) that used a problem-solving approach, both members of some couples reported that their relationship felt more balanced. There is clearly scope for enhancing this effect of interventions. Greater attention could be paid to increasing the agency of the person with dementia, taking advantage of the fact that several of the interventions led caregivers to an appreciation of the fact that the care-receiver still retained some abilities they were unaware (e.g. Melunsky et al., 2015). This greater appreciation of retained abilities could also be used to address the tendency of some caregivers to over-control the lives of their partner.

A second example is based on work suggesting that dementia can undermine the caregiver's experience of continuity in the relationship (Evans & Lee, 2014; Riley, 2019). The relationship no longer feels like a marriage, but as one characterised by the giving and receiving of care. This process is facilitated by perceptions that the person with dementia feels like a stranger. Both changes, in turn, contribute to changes in the feelings the caregiver has for their partner, as spousal love is replaced by feelings of care and protectiveness. Retaining a sense of continuity in the relationship is associated with a range of benefits for the couple (Riley, 2019). A rationale offered for the effectiveness of individual life review work with people with dementia is that it helps the individual to maintain a sense of identity and personal continuity by reminding them of their past (Kasl-Godley & Gatz, 2000). Some of the included

studies that used life review highlighted that this intervention can have a similar impact on the caregiver. For example, caregivers in the study by Kindell et al. (2019) reflected that the intervention gave them an opportunity to reflect on the personhood and identity of the care-receiver and understand them for who they are. This suggests that it may be beneficial to explore how life review interventions might be used to highlight aspects of the person with dementia, and aspects of the relationship, that are relatively continuous with the past – thereby counteracting the experience of discontinuity. Other categories of intervention brought an appreciation of the residual strengths of the person with dementia, and this also offers an opportunity to counteract the sense of discontinuity. Indeed, participants in the music therapy intervention of Baker et al. (2012) reported that participation had strengthened the relationship by helping the caregiver appreciate that the care-receiver is still the same person.

Limitations of the scoping review

The review excluded studies in which the findings for spousal couples could not be clearly identified from those of other dyadic relationships. This resulted in the exclusion of some studies that are relevant to the topic addressed by this review. For example, this criterion resulted in the exclusion of two randomized controlled trials that evaluated the effectiveness of reminiscence groups for people with dementia and their family carers, (Charlesworth et al., 2016; Woods et al., 2016). In neither trial did the intervention have any significant impact on the relationship.

Another potential limitation of the review relates to the criterion of including studies in which improving the relationship was not the exclusive or primary focus of the intervention. Papers with a range of aims that included a relational aim may have been more likely to be missed in the initial screen that involved inspection of the title and abstract only.

Conclusions

Dementia can have a negative impact on marriages/partnerships. Maintaining a strong relationship helps couples deal more effectively with the challenges of living with dementia. Developing effective interventions to help couples maintain a strong relationship should therefore be a priority for research focused on living well with dementia. Existing research on this issue has some strengths, notably the diversity of the interventions that provides the opportunity to match the intervention to the needs, preferences, and abilities of the couple. Going forward, a closer connection needs to be made between intervention development and research that has been conducted about how dementia can affect the relationship. More attention also needs to be paid to the methodological rigour of future evaluations of the effectiveness of the interventions.

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ORCID iDs

Emma Gilbert ⁽¹⁾ https://orcid.org/0000-0003-4745-8724 Darrelle Villa ⁽²⁾ https://orcid.org/0000-0001-5351-3510 Gerard A. Riley ⁽²⁾ https://orcid.org/0000-0002-1167-8023

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Author Biographies

Emma Gilbert is a Psychology PhD researcher at University of Birmingham. Her research interests are the impact of dementia on spousal relationships and avenues for intervention that centre on the relationship.

Darrelle Villa is a lecturer at the University of Birmingham and HCPC registered Clinical Psychologist. Her research interests are the impact of acquired brain injury on identity and relationships.

Gerard A Riley is an Associate Professor at Birmingham University and a practising clinical psychologist. His research interests include the impact of dementia and acquired brain injury on family relationships, and person-centred care in the context of family-provided care.