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# ‘Dancing down memory lane’: Circle dancing as a psychotherapeutic intervention in dementia—a pilot study

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## Abstract

**Background:** There is increasing recognition that psychological interventions for people with dementia and their carers are of value. Neuropsychological considerations and an exploration of the literature point towards the potential benefits of non-verbal, body-oriented interventions to work psychotherapeutically with people as their cognitive abilities deteriorate.

**Method:** A total of 18 people (11 people with moderate-to-severe dementia and 7 family carers) consented to partake. Measures were completed before and after the group therapy (45 minutes once a week for 10 weeks). Weekly progress monitoring sheets were completed and participants were interviewed after the group for their views.

**Results:** The therapeutic intervention had a positive impact on participants’ general well-being and mood, including improving people’s concentration and communication with others.

**Discussion:** The results of the pilot study support using therapeutic circle dance as a body-oriented psychological intervention for people with dementia and their carers. Further studies with more stringent methodologies in larger samples are required.

## Keywords

body-oriented psychological therapy, carers, dementia, quality of life, therapeutic circle dance

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## Introduction

The Alzheimer's Research Trust reports that dementia affects 750,000 people in the UK and costs the economy £23 billion per year (Alzheimer's Research Trust, 2010). It is estimated that two-thirds of people with dementia are living in the community (Alzheimer's Society, 2009) and that over 600,000 people are acting as their primary carers (Alzheimer's Research Trust, 2010). Dementia is a progressive condition in which changes in cognition and emotional regulation decrease a person's ability to function in everyday life and which has significant implications for psychological well-being (Cheston, 1998; Gillies & Johnston, 2004; McCurry, 2008). People who have been given the diagnosis of dementia can face major issues of loss, especially as the illness progresses from specific language and communication difficulties to memory loss, confusion and loss of control over their lives and relationships. Often this can result in anxiety and depression (Ballard, Patel, Solis, Lowe, & Wilcock 1996; Garner, 2004; Meisen, 2006; Violets-Gibson, 2004). Not only does the person diagnosed have to accept the permanent nature of these losses, but they also have to adjust to the certainty of future deterioration, which is made all the more complex and difficult due to failing capacity to use words to express feelings and make sense of the world (Cheston, 1998). In addition, sensory and physical impairments serve to further isolate the person from their environment. Finding ways to understand and work through the resulting emotions and distress associated with these changes is vital in order to enhance the well-being and lives of people with dementia.

The National Dementia Strategy (Department of Health, 2009), NICE/SCIE (2006) guidelines, and Everybody's Business (Care Service Improvement Partnership, 2005), which builds on the service models outlined in the National Service Framework for Older People (Department of Health, 2001) and supports the principles promoted in Securing Better Mental Health for Older Adults (Department of Health, 2005), highlight the need to improve access to psychosocial interventions for people with dementia. Although a range of individual and group psychotherapeutic interventions for people with dementia has been described (Cheston, 1998; Cheston, Jones, & Gilliard, 2003; Junaid & Hegde, 2007; Scott & Clare, 2003; Woods, 1996; Woods, Portnoy, Head, & Jones, 1992), these often involve individuals in the earlier stages of the disease and/or focus on improving the patient's cognition or reducing psychiatric symptoms rather than the person's subjective experience of dementia (Douglas, James, & Ballard, 2004; Hepple, 2004; Wilkinson, Srikumar, Shaw, & Orrell, 1998). There is often a dominance of biological models of illness and pharmacological treatments of psychopathology in dementia. The lack of psychological models, which seek to understand the experience of dementia and negative stereotypes about its treatability, have resulted in the neglect of this area (Hepple & Sutton, 2004). Therefore, the contribution that psychological therapies can offer in dementia care may be overlooked (Hepple, 2004).

The contribution of family carers supporting people with dementia has been better acknowledged in recent years (Department of Health, 2007; Wood, 2007). Caring for someone with dementia can be a complicated, unpredictable and lonely experience, and carers can also face their own significant issues of loss and emotional pain (McCurry, 2008; Meisen, 2006; Wood, 2007). Research highlights the potential cost implications in terms of increased risk of psychological distress for carers (Brodaty & Gresham, 1989; Donaldson, Tarrier, & Burns, 1997, 1998; Sorensen, Pinquart, & Duberstein, 2002), physical health problems and increased mortality (Schultz, O'Brien, Bookwala, & Fleissner, 1995). Clinical and research evidence indicate that the maintenance of a person

of dementia in the community has more to do with the well-being and attitudes of family carers than factors such as the severity of the disease (Clare & Shakespeare, 2004; Pratt & Wilkinson, 2003) highlighting the importance of attending to the relational world of the person with dementia and the environment of caregiving in service provision (Balfour, 2007; Dartington, 2010; Davenhill, 2007, Woods, 2001; Woods, Keady, & Seddon, 2008).

It is vital that services address both the emotional well-being of people with dementia and their caregivers in order to reduce pathological grieving and feelings of isolation (Meisen, 2006). The systematic review undertaken by NICE/SCIE (2006) found that interventions involving the person with dementia alongside the carer appeared to have the most beneficial effects on both parties' psychological well-being (Haupt, Siebel, Palm, Kretschmar, & Jänner, 2000; NICE/SCIE, 2006; Woods, Wills, Higginson, Hobbins, & Whitby, 2003).

Taking into account the deterioration in verbal abilities, memory and abstract thinking, there is a need to develop alternative and effective interventions to work therapeutically with people with advancing dementia. Therapeutic approaches that utilize non-verbal, body-oriented interventions are worth studying in this context due to positive reports in the literature and with regard to neuropsychological considerations. Although the benefits of therapeutic dance and dance movement psychotherapy for people with dementia have been widely acknowledged by practitioners within the field (Bridges, 2005; Coaten, 2001; Heymans, 2009; Hill, 2009; Perrin, 1998; Violets-Gibson, 2004; Wood, 2004) the evidence base is criticized for being largely anecdotal. However, a number of studies have emerged (Duignan & Milverton, 2009; Hokkanen et al., 2008; Newman-Bluestein & Hill, 2010; Van de Winckel, Feys, De Weerd, & Dom, 2004; Verghese et al., 2003; Wilkinson et al., 1998), which indicate the benefits of these therapeutic interventions in different domains, including improvement of orientation, mood, self-expression, relationships and coordination as well as facilitating reminiscence and understanding/accepting the illness.

This pilot trial was therefore conducted with the aim being to explore the effects of a circle dance group therapy on people with dementia, and their carers.

The following research questions were addressed:

- (1) Is it possible to carry out a course of structured body-oriented psychological therapy (in this case therapeutic circle dance) for patients with dementia and their carers (feasibility)?
- (2) Does the therapeutic circle dance intervention have a positive impact on social interaction/engagement, mood, quality of life and cognition in dementia?
- (3) Does the therapeutic circle dance intervention have a positive effect on carer's health and coping?

## Method

### *Recruitment*

The study was conducted in East London, UK. Participants were recruited through referrals from within the Mental Health Care of Older People's service. Ethical approval was sought and granted from the National Research Ethics Committee (NREC) and written informed consent was obtained from all patients before participation.

The ethics application paid particular attention to the matter of capacity to consent given the advanced nature of cognitive impairment amongst potential participants. Owing to the expected variation in people's level of cognitive ability, carers were also consulted during

the consent process. The research was conducted in accordance with the Alzheimer's society guidelines for research with people with dementia (Alzheimer's Society, 2008). The therapists were asked to pay particular attention to the issue of consent and people's voluntary participation in the group was monitored each week.

### *Inclusion and exclusion criteria*

People with moderate to advanced dementia (defined as Mini-Mental State Examination [MMSE] score of  $< 20$ ), who were expressing emotional distress (social isolation, anxiety, agitation) and carers who experienced carer burden were identified as suitable for the group by mental health care professionals. Participants with dementia had been formally diagnosed within the specialist mental health service (Diagnostic Memory Clinic). Each participant's case notes were reviewed by the researcher and diagnoses, age, number of years of education and drug treatments were recorded. Patients were excluded on the basis of extremely poor mobility or other physical health problems where the person would need the full and undivided support of a facilitator to partake.

### *The therapeutic intervention*

The therapy was provided by a senior clinical psychologist from the Psychotherapy for Older Adults service and a senior nurse from the Dementia Care Team, both of whom had been trained in this intervention with regular supervision and who had experience in delivering and using psychotherapeutic and psychosocial interventions with older adults who are suffering from a broad range of cognitive impairment. The intervention is integrative, incorporating influences from developmental psychology, body-oriented theory, dance therapy and neuropsychology.

Different body-oriented psychological intervention strategies have been developed with substantial overlap in their strategies when applied to working with people with dementia (Bridges, 2005; Coaten, 2001; Duignan & Milverton, 2009; Garfias, 2010; Heymans, 2009; Newman-Bluestein & Hill, 2010; Nystrom & Lauritzen, 2005; Violets-Gibson, 2004) and other disorders (Chaiklin, 1975; Röhrich & Priebe, 2006; Staunton, 2002; Totton, 2003).

Circle dance comes from a tradition of communities dancing together, common to many cultures for strengthening community and encouraging togetherness and well-being. As an accessible form of dance for people of all ages and abilities, with the emphasis on participation, not performance, it was felt appropriate to use when working with people with dementia (Circle Dance Network, 2010). It is proposed that moving together in a circle can facilitate a concrete sense of connectedness between group members (Violets-Gibson, 2004). It is delivered standing or seated, adapted for people with poor mobility and balance. The music is drawn from a variety of worldwide cultures. The dances include three or more sequences and simple walks, sways, moving into the circle and gentle arm waving. Participants need not use accurate movements, the emphasis is on moving together with the music in order to experience the body as a source of creativity and reliability and where awareness is focused on the body. Spontaneity is endorsed. Circle dance provides an opportunity to engage in touching, holding, moving together gently and to be part of a group; this is promoting re-attachment and connection by overcoming communication difficulties through the use of non-verbal means and verbalization of those experiences whenever possible and as required.

There are four main stages to each group session:

- (1) *Pre-warm up and check-in to circle dance group*: participants are welcomed and introduced to main procedures. The session begins with everyone being invited to sit in the circle of chairs. The therapists introduce themselves, welcome everyone into the group and initiate an exchange of greetings by going round each member of the group. If comfortable to do so people are encouraged to say how they are feeling. Name tags are worn every time. The aim of the pre-warm up is to establish a sense of identity, trust and focus in the group. It is explained that participants can do the dances seated or standing and that if at any point they feel like sitting out then they are to feel free to do so.
- (2) *Warm up*: simple swaying movements of the body are introduced, including clenching and releasing of hands, shoulders, neck and feet whilst in the circle.
- (3) *Intervention*: During each session four or five dances are introduced and practiced. On a few occasions props such as scarves or small instruments are also used. The therapists explain the theme of the songs and show the movements involved. The group is mirroring the movements: sitting, standing, moving arms, feet, hands and then whole-body movements. The body parts are named by one of the therapists. Participants are encouraged to hold hands as a way of making contact with each other and in order to stimulate social interactions. Themes are developed by the therapists by reflecting back people's spontaneous expression of feelings, thoughts, memories and interactions verbally and non-verbally. Participants are encouraged to express themselves freely and spontaneously.
- (4) *Ending*: After the dances everyone sits down, if standing, to wind down. Participants are asked about their thoughts and feelings relating to the experience before saying goodbye.

Sessions last about 45 minutes.

## Measures

- (1) *Mini-Mental State Examination (MMSE)* (Folstein, Folstein, & McHugh, 1975). The MMSE is a brief, well-established valid and reliable screening tool of cognitive function. A score of 23 out of 30 or less is suggested to indicate cognitive impairment. A score of between 10 and 20 indicates a moderate level of impairment and a score below 10 indicates a severe level of impairment.
- (2) *Quality of Life Scale in Alzheimer's Disease (QoL-AD)* (Logsdon, Gibbons, McCurry, & Teri, 1999). The QoL-AD is a 13-item questionnaire designed to obtain both a patient report and a caregiver report of the patient's current quality of life. Caregiver reports are strongly correlated with both caregiver depression and burden (Logsdon, McCurry, & Teri, 2007).
- (3) *The General Health Questionnaire (GHQ-12)* (Goldberg, 1978). This is a shorter version of the original GHQ scale, which is used for detecting mental health problems. A score of 12 or more indicates problems. Participating carers completed this with respect to their own health.

Monitoring progress sheets (Spector et al., 2003) were completed after each session by the therapists for qualitative analysis, including details of each participant's general mood,

interest, engagement, enjoyment, energy levels and interaction. At the end of the 10 weeks participants were asked for their thoughts and feelings about the group.

## Results

### *Participants*

A total of 18 people (11 patients with dementia and 7 of their carers) were identified as suitable and referred by their health professionals. Of these 18 people, 10 attended the group. Although the design did not involve a control group, a descriptive comparison of data gathered before and after the group was carried out for those who did and did not attend the intervention group.

Clinical and demographic characteristics of all participants are summarized in Table 1 (patients) and Table 2 (carers).

Two out of seven patients improved in their cognitive state during therapy and for five out of seven patients an improvement of quality of life scores was noted; the general health questionnaire score of carers did not change during group participation (sample size not allowing for inferential statistics).

### *Qualitative results*

**General observation/findings.** The therapists noted many moments of warmth, social interaction, empathy and the processing of a range of feelings in the group. Self-reports, therapist observations and weekly monitoring notes indicated benefits as follows: improved mood, concentration and interactions; participants valued meeting new people and looked forward to attending the group sessions.

From the first session there was a clear sense of group coherence. Everyone held hands without hesitation or discomfort. There was good engagement, acknowledgement of each other's needs, sharing of observations regarding past experiences and changes in participants' appearance and behaviour.

The therapists introduced some musical instruments including a tambourine, maracas and castanets. They also suggested for people to bring items with personal meaning from home to the group if they wanted. One example to illustrate the associated interaction was that one of the carers brought a belly dancing scarf. The scarf was brought into the group and participants were asked if they would like to use it during a seated dance. They agreed and one of the therapists shook the scarf above her head for a few seconds before passing it on. All participants took part, making eye contact with each other, spontaneously waving and shaking the scarf before passing it to the next person in the circle. In spite of advanced dementia and significant short-term memory problems no one needed any prompting to pass the scarf on and all participants made symbolic use of the item.

Three carers reported that the group helped them to acknowledge the reality of dementia diagnosis and process their feelings of grief and loss as well as see beyond the diagnosis to the person they cared for. They commented that before the group the burden of care often meant that they focused predominantly on the problems but that participation in the group helped them to re-connect with their loved one's residual strengths and individual personalities.



**Table 1.** Patients' demographic and clinical characteristics

Identifier (gender, age, pseudonym)	Diagnosis and psychiatric medication	MMSE pre-/post- therapy	Quality of life scores: self pre- /post-therapy	Quality of life scores: staff/carer pre-/post-therapy
Participated in group therapy				
1. Male, 86, 'Sam'	Query fronto-temporal dementia, primary progressive aphasia and vascular component Galantamine	Incomplete due to aphasia	36/43	27/40
2. Female, 79, 'Margaret'	Probable dementia of the Alzheimer's type Galantamine	3/9	Unable to complete pre-therapy/37	24/33
3. Female, 77, 'Diane'	Probable mixed dementia of the Alzheimer and vascular type with a mood disorder Galantamine	19/24	29/39	32/28
4. Female, 84, 'Belle'	Probable mixed Alzheimer and vascular dementia Quetiapine, Mirtazepine	2/2	33/27	22/30
5. Female, 84, 'Vivien'	Probable Alzheimer's dementia with a vascular component Donepezil	15/15	29/32	27/29
6. Female, 75, 'Verity'	Vascular dementia quetiapine and Olanzapine	Unable to complete <10/< 10	25/27	22/20
7. Female, 79, 'Gill'	Probable Alzheimer's dementia with a vascular component—	20/20	32/37	30/35
Did not participate in group therapy				
8. Male, 96, 'Paul'	Probable Alzheimer dementia Donepezil	26/24	34/37	32/38
9. Female, 83, 'Sarah'	Probable Mixed Alzheimer and vascular dementia Galantamine	16/— (no post-therapy score due to ill health)	34/28	29/23
10. Female, 83, 'Susan'	Probable Alzheimer's dementia with a vascular component Donepezil	11/16	43/45	42/38
11. Male, 88, 'Tom'	Probable Alzheimer's dementia with a vascular component Donepezil	18/missing	39/missing	25/missing

MMSE, Mini-Mental State Examination.



**Table 2.** Carers' demographic and other characteristics

Identifier (gender, age, pseudonym)	Other information	General health questionnaire pre-/post-therapy
Did attend group		
3C. Male, 81, 'Kevin' (husband to 3)	Carer, multiple physical health problems	12/missing
4C. Male, 88, 'Albert' (husband to 4)	Carer, range of physical health problems	10/9
5C. female, 63, 'Jean' (daughter to 5)	Carer N/A	12/12
Did not attend group		
8C. Female, 91, 'Janet' (wife to 8)	Carer N/A	11/12
9C. Female, 61, 'Elizabeth', (daughter to 9)	Carer N/A	12/15
10C. Male, 79, 'Peter' (husband to 10)	Carer N/A	6/8
11C. Female, 84, 'Phillis' (wife to 11)	Carer N/A	11/missing

**Individual observations and findings.** Sam and Margaret both became increasingly anxious initially and needed ongoing reassurance before the group started. However, once the group began they appeared to relax, engage with the group and smile. By the third week they both recognized the therapists as soon as they arrived and understood they were there to dance. Sam had a significant expressive dysphasia. Over the weeks his verbal communication and expression improved and other members of the group were able to understand him better. He would often dance to his own rhythm and beat whilst holding his wife's hand and making eye contact with the rest of the group. If more music was played after the group then Sam would continue to dance spontaneously, smiling and encouraging the others to join him until his transport service arrived.

Diane (who came with her husband Kevin as her carer) described herself as 'not a group person and shy'. She was emotional, often tearful and was struggling to come to terms with her deteriorating abilities, feeling 'useless'. Although initially somewhat reserved and quiet over the weeks she began to make jokes and initiate conversations spontaneously. She brought some photos of herself in her work uniform one week and showed these to people, proudly talking about her past career. This stimulated a discussion about some people's memories of work and their strengths. Diane remarked at the end of the group that whilst it had been difficult being in a group to begin with, she really enjoyed getting to know people and felt more confident in group settings. Her husband, Kevin, initially struggled as he had found seeing other people with more advanced dementia difficult as it made him aware of the implications of the illness for him and Diane over time. He felt his mood had dipped and was not sure if he wanted to come again. However, he decided to continue attending and reported an improvement in his mood, based on seeing people engage with each other on a social and emotional level in a positive way, in spite of the difficulties associated with the advanced stage of the illness. This helped to reassure him as well as begin to accept Diane's strengths and difficulties.

Belle (who came with her husband Albert as her carer) presented as being withdrawn and was fearful of people she did not know, often resulting in her becoming agitated. This worried Albert, who was also increasingly isolated due to being unable to leave Belle

without her becoming distressed. Albert initially hesitated from joining in, but from the offset of meeting other carers he struck up a friendship for the duration of the group, sharing many stories. During the second session Belle reached out and stroked Albert's hand and then kissed it. He remarked to one of the therapists that he could not remember the last time she had done that. Belle had been taking antipsychotic medication for agitation and restlessness for a number of years prior to joining the group. As the weeks progressed she became more responsive to the rest of the group, appearing to recognize others and that she was there to dance. Her eye contact improved and her posture straightened from previously being quite stooped over. Initially she would become quite anxious when Albert left her side. As the weeks passed she was more relaxed in the company of the rest of the group. Although Belle engaged with the group whilst dancing to the songs, she remained quiet and withdrawn between dances. However, she became gradually more responsive to the group's discussions, making comments about Albert and their relationship whilst patting his hand tenderly. The care coordinator reported a change in her behaviour at home, which became more settled and the psychiatrist was able to take her off the antipsychotics to good effect. Albert reported that Belle became more alert and responsive to conversation at home. Following the group they have been regularly attending church cafes, socializing more in the community and are less wary of service input.

Vivian (who came with her daughter Jean as her carer) was very sensitive to the rest of the groups needs. In spite of Sam's significant expressive difficulties Vivian would spend time chatting to him patiently. She was insightful as to her own memory problems and found other members acceptance of her support enabling. She had been anxious about joining the group due to concerns about other's perceptions of her and her problems, which had resulted in her withdrawing and isolating herself. However, this abated over the weeks. Following the group she joined another group and reported feeling a lot more confident as a result. Jean, her daughter, reported that she thoroughly enjoyed the group, in particular seeing her mother enjoying herself so much.

Gill had been a dancer and immediately became familiar with and remembered the steps to the dances in spite of her attendance being very sporadic. The other members of the group often looked to her to mirror her movements and this gave her great pleasure.

Verity attended the first three sessions. Her mobility and balance were poor and she sat out of many of the dances, often seemingly disinterested. She said she was ok to just watch the group although she partook in the seated dances. She was admitted to hospital due to ill health and did not re-join the group.

## Discussion

With an increasing number of people being diagnosed with dementia there is a need to find meaningful and engaging psychotherapeutic interventions to improve patient's and carer's quality of life, facilitate emotional expression, stimulate cognition and work to prevent or manage the psychiatric and behavioural difficulties that often accompany the illness as it progresses. This pilot study aimed to explore the effects of a circle dancing therapy group in people with dementia and their carers. The interventions were provided in addition to routine care within the Mental Health Care for Older People service. Whilst the impact of the findings is limited due to the exploratory and small-scale pilot nature of the study, there are a number of observations worth considering for future research and for practitioners interested in providing and/or developing similar interventions.

### *Clinical considerations*

Reviewing the various studies evaluating the use of psychological therapies in dementia, Woods (1996) concluded that people with advanced dementia can engage in and benefit from emotionally salient procedural-based activities. The qualitative findings of this study provide further support for this viewpoint. The literature suggested specific benefits of dance therapy for people with dementia on communication, emotional expression, communal spirit and acceptance (Bridges, 2005; Coaten, 2001; Duignan & Milverton, 2009; Heymans, 2009; Hill, 2009; Hokkanen et al., 2008; Newman-Bluestein & Hill, 2010; Perrin, 1998; Van de Winckel et al., 2004; Verghese et al., 2003; Violets-Gibson, 2004). Even though using therapeutic circle dance rather than dance movement psychotherapy the results of this study provide additional evidence in this respect. Music, dance and movement facilitate a (non-verbal) dialogue through which people with dementia and those around them can communicate and connect more effectively and whilst verbal communication becomes more difficult. Despite difficulties in time management and with transport arrangements, participants attended at least 8 out of 10 sessions, indicating a good level of acceptance of the treatment.

The group also appeared to help partners in re-connecting as husband and wife or daughter and mother. As proposed by Heymans (2009) participating in a circle dancing group is an opportunity to let the illness fade into the background for a short time. When one partner takes the role of carer the relationship and affections can change, resulting in both parties experiencing loss as so clearly evidenced by the reports of Belle and Albert in this study. Dancing together appeared to enhance the relationship, whilst experiencing each other as individuals who have affections and also sexual feelings, which could still be expressed. The couples displayed many moments of affectionate tenderness over the weeks.

It has been noted that people of this age group are familiar with circle interactive games which use movement (Opie & Opie, 1969). Such an intervention can potentially re-connect members with their past experiences and relationship, facilitating their sense of self and familiarity. According to Violets-Gibson (2004) the circle helps to create a safe holding environment. The central space is considered as 'transitional' (Winnicott, 1953) within which the group members can play and experiment to the music in the presence of each other (Violets-Gibson, 2004) and contained by the group facilitators. The familiar movements and rhythms can help people to re-connect with their own bodies thus accessing memories and facilitating emotional expression. The shared experience can help people to identify as a member of a group with full and unique life histories by finding a 'common language' for their feelings. For people with dementia, who have difficulties in orientating themselves in person, time and place and whose sense of self can be fragmented, this method can help offering a sense of integration and connection thus alleviating fear and isolation, at least for the duration of the session (Violets-Gibson, 2004).

The body-oriented intervention strategy explicitly facilitates self-expression and the rediscovering of various skills such as moving, singing, etc., as means of communicating with others. Psychotherapeutic interventions that focus on movement and the body are based on the premise that 'movement and emotional experiences are biologically and experientially associated' (Röhrich, 2009) and that the 'sense of self is intricately related with the object, the emotion and the movement response' (Damasio, 2000). Neurophysiologically the limbic system is anatomically and functionally linked with the basal ganglia (Damasio, 2000; Kaplan-Solms & Solms, 2000). As discussed by Röhrich

and Priebe (2006) this is emphasized by Trimble's (1997) observation on how 'movement and emotion are linked in common speech hence a moving experience' (p. 114). The usefulness of body and movement-based interventions for disorders with limited response to talking therapies is growing (e.g. Loew, Tritt, Lahmann, & Röhrich, 2006; Röhrich, 2009; Totton, 2003).

It is furthermore important to note, that some research indicates that patients with even the most severe dementia (MMSE score of  $\leq 4$ ) can not only acquire but also retain long-lasting procedural memories (Kawai et al., 2002). Therefore, well-rehearsed skills and emotionally salient behaviours can be employed for a variety of means well into the later stages of the disease (Violets-Gibson, 2004). Sacks (2008) described how the response to music (musical perception, musical emotion, musical memory and sensibility) has been shown to be preserved into the advanced stages of the disease. The interventions seem to have stimulated procedural learning and enhanced concentration. One may speculate that this is because dancing is a dynamic rather than repetitive physical activity and can help to connect memories from the past to the present (Rösler et al., 2002; Wood, 2004).

The format of the group offered a coherent structure repeated week by week. It may be speculated that this helped participants to regain confidence in their relationships, mobility and abilities. It gave carers the opportunity to meet others in similar circumstances to themselves and helped them with their understanding of the illness, grief and hope. In addition reports from some care coordinators suggested that social interaction outside of the group improved. Although group psychotherapy for carers and people with dementia is still in its infancy, initial results using different sensory activities including music, dance and reminiscence are promising and show effects on improved quality of life for both parties (Haupt et al., 2000; Schweitzer & Bruce, 2008).

### *Methodological considerations*

This was a feasibility pilot study and although the intervention strategy as well as the overall research design appeared feasible, there are a number of methodological issues that could be amended for future studies and groups. It became apparent that the measures chosen were not adequate to the aims of the study. Whilst some participants showed improvements in communication, concentration and memory during the group the MMSE was not an adequate measure to capture these cognitive changes or the more subtle changes seen by the facilitators such as improvements in emotional expression and relationships between participants.

### *Outlook*

Whilst the context of a clinical trial requires a time-limited study design, it may be necessary to explore the impact of the interventions on emotional or behavioural symptoms of dementia patients and the associated interactions with others/carers over a longer period. Clinicians could facilitate implementing such interventions at day centres and residential units in order to integrate sessions using dance, movement and music on a more permanent basis to enhance day-to-day well-being, stimulate cognition and ongoing quality of life. It may be worth developing a more comprehensive disorder specific treatment manual for initial and advanced stages of dementia, hereby including other therapeutic interventions

as described in dance movement psychotherapy (e.g. Payne, 2006) or other body-oriented psychological therapies.

For both carers and therapists living and or working with people in advanced stages of dementia it can be a groundbreaking and very encouraging experience to see how withdrawn and relatively unresponsive individuals move freely, sway, smile and re-connect in a group, emphasizing that they can still experience emotions deeply. As Sacks (2008) wrote, that 'dementia, at least at these times, is no bar to emotional depth. Once one has seen such responses, one knows that there is still a self to be called upon, even if music, and only music, can do the calling' (p. 385).

We hope that this paper as part of the developing evidence base encourages other clinicians unfamiliar with such interventions to explore and integrate such methods into their practices with a view to improving the quality of life for people with dementia and their carers.

## Conclusion

This pilot study found that participants appeared to benefit emotionally, socially and cognitively as a result of a dance movement group therapy and points to the scope for such interventions in community settings. Deterioration is expected in dementia but the need for emotional connection persists. Finding ways to stimulate and maintain social skills, emotional expression and connection, confidence in people with dementia and their carers is vital in order to enhance their quality of life regardless of the stage of the disease. Psychological therapies using movement and dancing in dementia need further study and consideration of a range of methodologies is required in order to evaluate their impacts.

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