



RESEARCH

A Pilot Study of the Acceptability of a Dance Café for People with Severe Dementia

Clara Ajoke Awoyomi*, David Oliver† and Rachel Forrester-Jones‡

Context: Dance has been suggested as a way of helping people with advanced dementia, providing meaningful involvement and activity.

Objectives: To investigate if individuals with advanced dementia would be able to take part in dancing in a Dance Café within a residential home setting and undertake the assessment of nutrition, quality of life, balance and mobility.

Methods: A wait-list intervention approach was used, with residents allocated randomly to the intervention or a control group, who received the dance intervention later. A Dance Café was held weekly for 8 weeks, and assessments were made of weight, nutrition, balance, mobility and quality of life. Focus groups were held with staff and family members after the intervention period to assess their opinions.

Findings: The regular assessments of nutrition, balance and quality of life were obtained for the residents with dementia, and they were able to join in the Dance Café. No conclusions could be made from the limited quantitative results; in the qualitative assessment, however, the staff and families all felt the participants had benefitted from the Dance Café in terms of improved mobility and positive psychosocial effects.

Limitations: The small size of the intervention group prevented any statistical analysis of the quantitative assessments.

Implications: It is possible to undertake a Dance Café with people with severe dementia, and assessments of nutrition and mobility can be undertaken. Further research with a larger group would be needed to investigate its effectiveness.

Keywords: Advanced dementia; residential home; dance; music; dance café; acceptability

Introduction

People with dementia are often viewed as being unable to undertake social activities. This may lead to social isolation as well as increased confusion, wandering, agitation, sleep disturbance and boredom (Alzheimer's Society, 2014). Older people in residential care facilities may be at particular risk as there are limited opportunities for staff to provide meaningful involvement for residents, due to time pressures and a reluctance to start activities that may be difficult to continue (Harmer and Orrell, 2008).

Dancing has been suggested as helpful for improving the well-being of older people. A review of 18 studies showed that there was evidence, for healthy older people, that dance could help with strength, mobility, balance and gait, and may help to improve muscle power, reduce falls and lower cardiovascular risk (Keogh *et al.*, 2009).

A meta-analysis of 23 trials of dance therapy for older people found that dance may also reduce symptoms such as anxiety and depression and improve quality of life, leading to positive changes in subjective wellbeing, positive mood, affect and body image (Koch *et al.*, 2014). Two systematic reviews of dance therapy discussed how most studies reported therapeutic benefits from dance, although the evidence was of poor quality, as there was a risk of bias, limited description of the combination of results and limited use of validated quality scoring systems (Strassel *et al.*, 2011; Mabire *et al.*, 2019). However, the benefit was such that dance could be seen as a holistic intervention with both therapeutic and recreational intention (Strassel *et al.*, 2011; Mabire *et al.*, 2019).

In the USA, the Music and Memory project (<https://musicandmemory.org/>) has been encouraging carers of people with dementia to enable the individuals to listen to music that they particularly like through an iPod. Within this Project there have been examples of increased awareness and improved communication of people with severe dementia. Studies with dance for people with dementia have focussed primarily on the psychological aspects, showing reduced depression (Vankova *et al.*, 2014) and increased mental assessment scores—the Mini Mental State Examination

* Medway Community Healthcare, Gillingham, GB

† Tizard Centre, University of Kent, Canterbury, GB

‡ Professor of Social Policy, Head of Department of Social Policy Sciences, Director of the Centre for the Analysis of Social Policy, University of Bath, GB

Corresponding author: David Oliver (drdjoliver@gmail.com)

(Hokkanen *et al.*, 2008; Van de Winckel *et al.*, 2004) and Clock Drawing Test (Hokkanen *et al.*, 2008). In Australia, an evaluation of Wu Tao dance, a dance form using gentle movement with music and meditation and encouraging expression through movement, was undertaken with people with dementia. A reduction in agitation and improved wellbeing was found and there was also an increase in the therapeutic bond with staff (Duignan *et al.*, 2009). A small study ($n = 23$) of dance showed improvement in individuals' wellbeing, but no demonstrable changes in their physical state (Charras *et al.* 2020).

As dance was thought to be one way of stimulating and involving people with dementia, this study aimed to see if an investigation of dance for people with severe dementia living in a nursing home was acceptable and possible, using a Dance Café approach and assessing mobility and nutrition and wellbeing.

Methods

Sample

The study took place in a nursing home in Kent which provides care for people with severe dementia and challenging behaviour. The inclusion criteria were residents who had been at the home for at least 6 months (to exclude issues of people still settling into the home's routines), with an assessed risk of falls at low or medium, assessed by the home's Falls Risk Assessment Tool. Residents could be of any age, and they varied from between 54 years and 100 years old. In addition to paid carers, family members of the home residents were included in the study if they visited regularly and volunteered to be participants.

Procedure

The study used a wait-list case quasi-experimental design with mixed methods, with the eligible residents being randomised to the intervention group, who joined the Dance Café immediately for a period of 8 weeks, or to the Control group, who started the intervention at 8 weeks, after the completion of the study.

The Dance Café was held weekly for 8 weeks. A dance therapist who specialised in older people attended and led the first two sessions, and staff members, having learnt the Dance Café routine, continued for the other sessions. The Café lasted for one hour and took the form of 20 minutes warm up session, a short break for a drink and light refreshment, a further 30-minute dance session and a cooling down time. Before each session, all participants were checked for continence to ensure comfort, and their footwear was checked to ensure correct fitting, ease and safety. A range of music was used for the sessions, including classical music, ballads and pop music from the 1960s to 1980s, to allow for music that would appeal to people with differing tastes.

Part of the purpose of this pilot study was to see if it was possible to undertake assessment of the participants with severe dementia. The quantitative assessments used included:

- Measurement of weight—if necessary, using a seated weighing scale

- Standardised food assessment, which is used routinely in the home giving the percentage of each meal consumed
- Timed Up and Go (TUG) where the person is timed rising from a chair, walking 3 metres, turning, walking back and sitting down. This is a standardised, reliable and valid test for functional mobility (Podsiadlo *et al.*, 1991)
- Tinetti Balance Assessment Test (TBAT)—this assesses balance and gait—considering both sitting and when the person walks across the room, first at usual pace, then at rapid pace. A score is given for both aspects (Tinetti, 1986)
- DEMQOL-Proxy—an evaluation of quality of life using the observations and comments of the caregivers most involved in the person's care (Easton *et al.*, 2018)

Momentary timed observation as a method of recording movements and any changes in behaviour was considered, but it was decided that this method, which would have either meant video recording the sessions or a researcher formally observing, risked being obtrusive in what was meant to be an informal, enjoyable setting. These chosen assessments were undertaken for both groups before the intervention (T1), at 4 weeks (T2) and at 8 weeks (T3) by the same researcher (CAA) who had undergone training in the use of these assessments. The number of falls and hospital admissions for the four weeks before the intervention and during the 8 weeks of the intervention were recorded.

A qualitative approach was also taken. Two Focus Groups were held at the end of the 8-week Dance Café intervention. Four members of staff took part in the Staff Focus Group and 2 family members took part in the Family Focus Group. Field notes were kept by the researcher (CAA) as well as by the Dance Therapist. After the 8 weeks, the Dance Café continued on a regular basis as part of the care offered to residents within the home. Participants in both the Dance Café group and the Control group were invited.

Analysis

Statistical analysis of the quantitative data was not undertaken since the sample was so small, but all assessments were recorded. The qualitative data from the focus groups were coded and subjected to inductive thematic analysis. Using Braun & Clarke's (2006) six-phase approach, patterns, concepts and themes across the dataset were identified to provide an in-depth account of how participants viewed the Dance Café. All three authors initially read the transcripts line by line, independently generating codes which, after collective discussion, were then combined into themes aligned with relevant quotes. Revision and refinement of codes and themes then took place by all three authors until saturation of the main themes was reached.

Ethics

Consent for the study was complex, as the residents all suffered from severe dementia. The residents were

assessed under the Mental Capacity Act for their capacity to consent to the study. All were found to lack capacity. Therefore, a personal (e.g., family member) or nominated consultee (a member of staff) who knew the person with dementia well was recruited. Consultees were asked to give their opinion as to whether they thought the person with dementia would want to participate in the dance café if they had capacity. The residents were all assessed for their assent at the start of each Dance Café session. The study gained a favourable ethical opinion from the UK Health Research Authority at the East of England- Essex Research Ethics Committee in March 2017.

Results

We were able to recruit to the study. Five participants (2 males and 3 females with a mean age of 77 years [range 56–85]) made up the Dance Café group and 4 participants (3 male, 1 female; mean age 82.5 years [range 81–84]) made up the Control group.

The results for each assessment varied greatly, with differences between all the residents, whether in the dance group or control group. The weights of all participants were essentially stable, varying only by 1kg to 2kg, and there were increases in both dance and control groups. Food intake increased in four of the five dance group participants and in all of the control group. There were no falls in either group during the study period. There was variation in the results of the TUG, with no clear differences between the groups. The times taken increased for many participants, but it was possible to undertake this assessment with the residents. Balance, as assessed by the TBAT, did show a trend to improvement in the dance group. The assessments of quality of life were recorded for all time points but no clear changes or differences were seen. The full details are provided in Supplementary Information. Statistical significance could not be determined due to the small sample size. However, it was possible to undertake the regular assessments of weight, nutrition, mobility and quality of life for these residents with severe dementia at all time points.

Two main themes relevant to the overall aim—seeing whether or not older people with dementia would be able to take part in Dance Café—were identified from the qualitative data included: improved mobility and psycho-social effects. These are presented with aligned quotes below.

Theme 1: Improved mobility. Both staff and carers reported that they observed residents to be more mobile during and after the Dance Café sessions. Staff reported that residents' feet, arms and hands (used for all dance moves) appeared to be more agile during dances, and family members recounted their surprise at seeing this change in mobility of their loved-ones, as exemplified in the following quotes:

The mobility of most of them has improved a great deal. (Staff member 2)

To see Mr. B dance was a complete success of the study. He has never stopped in a place for more than 2 minutes. For him to stay that long in the dancing hall is a pleasant experience. He was seen to be

talking more about dance and walking better. (Staff member 1)

I think it was a miracle to see my dad move his leg to dance, this, I have not seen him do since I grew up as his daughter. He loved going to functions but all he did was just sit and watch. (Family member 2)

Another two residents were observed to spontaneously dance outside of the Dance Café period: one resident purposefully entering the Dance Café venue and dance, and another dancing in the corridor. Staff also commented on the increase in appetite/food intake of all Dance Café group members—which they attributed to the increased mobility of residents through dancing.

Theme 2: Psycho-social effects: All focus group participants reported that they observed improvements in residents' moods and their ability to reminisce and socialise. Carers noted how their loved ones smiled more than they had seen them do for a long time, and staff similarly said that residents smiled and laughed more during and after sessions. This implied that residents' enjoyment lasted beyond the activity each week, and in some cases, as shown below, this enjoyment appeared to mediate a reduction in one resident's challenging behaviour.

I hope this is going to continue. My husband always smiles more nowadays, he has less episodes of aggression towards me or his daughter nowadays and no staff has reported any episode of aggression of late. (Family member 2)

I was amazed and impressed at the rate the participants positively responded to the dance. Most especially, I was surprised to see Mrs. A dancing and smiling compared to how she was—aggressive, fighting and tearful all the time. (Staff member 3)

In addition to observations of enjoyment, staff reported how two residents demonstrated a level of reminiscence previously not observed, in which they talked about the Dance Café in between sessions—one resident saying to a colleague 'Do you know? I have been dancing'. Having something to talk about (the dances and music) also meant that residents who were involved in the Dance Café appeared to socially interact more with each other.

Field notes kept by the investigator and comments from the Dance Therapist also reported that changes were seen in the residents involved in the Dance Café. Increased involvement in dance was seen over the course of the study, although there had been reluctance for some residents to dance initially. The use of different genres of music was tried but music from the 1950s to 1970s seemed to be more appreciated by the participants, particularly music by ABBA. This may reflect the musicality of ABBA and the influence on people of all ages has been commented on as 'essential, influential melancholy' (<https://www.npr.org/sections/therecord/2015/05/23/408844375/abbas-essential-influential-melancholy>) and that their 'great songs, great music' are 'visions of perfect pop music' (<http://www.bbc.co.uk/culture/story/20140415-why-are-abba-so-popular>).

Discussion

This study was planned as a small pilot to explore whether or not a Dance Café approach would be possible and acceptable to undertake with people with severe dementia within a nursing home environment. Our small study fits with the approach taken to evaluate the possibility of a complex intervention—defined in the MRC Framework as an ‘exploratory trial’, which would ‘describe the constant and variable components of a replicable intervention and a feasible protocol for comparing the intervention with an appropriate alternative’ (Campbell *et al.*, 2000). Our results show that the Dance Café approach was appropriate for the sample and people with severe dementia were able to undertake assessments, although it was necessary to spend time reassuring the participants to enable them to participate fully. The assessments were all undertaken by one person, the investigator (CAA), and this may have facilitated the assessment process as the participants were familiar and had a rapport with the assessor. The assessments of weight, food intake and falls were undertaken on a routine basis within the home, and were part of the normal processes there. The assessment of quality of life used a measure which could be completed by the caregivers, as all the participants had limited capacity to be able to be involved in other quality of life assessments, which were dependent on their participation. It appeared possible to undertake the assessment of quality of life using the proxy views of the staff, who knew the participants well and were caring for them on a regular basis. The use of observation of the participants and the control group was considered, but in this pilot study the aim was to assess the feasibility of the project, and to keep the assessments as practical, easy and non-intrusive as possible. Although formal observation could have provided an important assessment, this would have been time consuming and was not feasible within the home.

Although this study was too small to make conclusions based on statistical analysis, the qualitative results show that the impressions of staff and families were positive and that they observed improvement in some areas. In particular, both staff and families commented on the aspects of enjoyment in the dancing, improved mobility, increased reminiscence and social engagement. This is similar to the study in Australia using Wu Tao dancing, when four of the six participants were noted to be less agitated and staff commented positively and noted that the group dynamics had become more positive within the home (Duignan *et al.*, 2009). Similarly, in Hong Kong a 12-week dance course for older people within the community showed improved psychological wellbeing (Braun and Clarke, 2012). Moreover, the enjoyment of the dance was partly attributed to the social network and friendship as well as improvement in fitness and mobility (Hui *et al.*, 2008).

The care of people with dementia within nursing homes has often been neglected, with a lack of meaningful activity for the residents, who may have little stimulation (Harmer and Orrell, 2008). The use of dance for older people has been shown to be helpful in improving power, agility and gait, and may help reduce the risk of

falls (Keogh *et al.*, 2009). Other studies showed that dance movement therapy improved quality of life, reduced depression and anxiety, and was associated with positive mood, wellbeing, affect and body image (Koch *et al.*, 2014). However, in both of these reviews methodological shortcomings were noted: many of the studies had small numbers of participants, and were of poor quality methodologically.

Within dementia care, small changes in cognitive ability have been seen with dance and movement therapy and music-based exercises (Hokkanen *et al.*, 2008; Van de Winckel *et al.*, 2014). Moreover, the changes seen with dance and movement were more in visual, planning and speech functions, than on memory although these changes were small (Hokkanen *et al.*, 2008). In neither of these studies were behavioral improvements seen. In our study there was evidence of improved social interaction and enjoyment with the Dance Café approach, and a reduction in challenging behaviour, but no clear differences in physical or mental abilities. The small numbers did not allow for differences to be detected, although a trend was seen for the Dance Café participants to eat more and gain weight.

There were limitations within this study, in particular the small size of the intervention group. However, the aim of the study was to see if the assessment of people with dementia was possible, and this was confirmed. The home does aim to provide continual stimulation for the residents, but this innovative project, the Dance Café, may have been seen more positively and encouraged staff to become more engaged with the residents. This may have led to a more positive assessment of the Dance Café approach by the staff. The qualitative assessment allowed a wider view of the effectiveness of the Dance Café, using the family and carers in this evaluation as the participants were less able to be closely involved in the evaluation due to the severity of the dementia.

This pilot study has shown that it is possible to organize a Dance Café with the residents of a nursing home who have severe dementia. They were able to undertake the assessments and there was evidence from the staff and families that there were improvements in behaviour. The music was important, and ABBA was particularly successful in encouraging all the participants, both residents and staff, to be fully involved in the dance.

The quality of life for people with advanced dementia is often difficult to assess, as they may have limited cognition and communication. Interventions, such as the Dance Café, which may help to stimulate reminiscence and social activity, are very important to improve quality of life. Structured activities, such as the Dance Café, may also allow staff to engage in activities with residents. This study has shown that such an approach is possible and longer-term changes may be seen. Further study, with larger numbers of participants, would be worthwhile to establish the role of music and dance within the care of people with dementia. Given recent increased political and policy shifts to improve adult social care (Forrester-Jones and Hammond, 2020), particularly in relation to healthy later living (see, most recently, the Industrial Strategy Challenge

Fund 2019 that seeks to invest in healthy ageing and innovation) as well as public interest and concern over older people in care homes during the COVID-19 pandemic, more investment in research that tests out interventions such as the Dance Café to improve the lives of people with dementia are necessary and timely.

Additional File

The additional file for this article can be found as follows:

- **Supplementary material.** Results of the assessments of participants and Control subjects. DOI: <https://doi.org/10.31389/jltc.67.s1>

Ethics and Consent

– REC reference 17/EE/005, IRAS Project ID 201332.

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Competing Interests

The authors have no competing interests to declare.

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