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## Exploring the impact of music concerts in promoting well-being in dementia care

Kagari Shibazaki<sup>a</sup> and Nigel A. Marshall<sup>b</sup>

<sup>a</sup>Department of Social Work, Seirei Christopher University, Hamamatsu, Japan; <sup>b</sup>School of Education and Social Work, University of Sussex, Falmer, UK

### ABSTRACT

**Objectives:** This study explores the specific effects of live music concerts on the clients with dementia, their families and nursing staff/caregivers.

**Methods:** Researchers attended 22 concerts in care facilities in England and Japan. Interviews were carried out with clients with dementia, nursing staff and family members. Observations were also carried out before, during and after the concerts. All observations were recorded in field notes.

**Results:** The effect of the concerts in both countries was seen to be beneficial to all clients and nursing staff, whether or not they attended the concert. Interviews with clients with mild to mid-stage dementia noted increased levels of cooperation, interaction and conversation. Those with more advanced forms of dementia exhibited decreased levels of agitation and anti-social behaviour. Staff members reported increased levels of care, cooperation and opportunities for assessment. Family members noted an increase in the levels of well-being in their partner/parent as well as in themselves. The study also suggested that the knowledge of musical components, an awareness of the rules of music and specific musical preferences appear to remain well beyond the time when other cognitive skills and abilities have disappeared.

**Conclusions:** This initial study provided some further indication in terms of the uses of music as a non-pharmacological intervention for those living with all stages of dementia. These included opportunities for assessment of physical abilities as well as facilitating an increasing level of care.

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Dementia; music; care giving; families; nursing staff

### Introduction

Currently, in the UK, estimated 850,000 people have been diagnosed as having some form of dementia, a figure which represents 1 in every 14 people over the age of 65 years (Alzheimer's Society, 2015). Similarly, in Japan, over four and a half million people (3.6% of the population) have been diagnosed with dementia with the Japanese Ministry of Health, Labour and Welfare recently projecting an increase in this figure to an estimated seven million by 2025. Worldwide, estimates range from 35 to 48 million people having some form of dementia with one new diagnosis occurring every 4 seconds (Hunt, 2013) with the global costs of dementia estimated to be around US\$ 650 billion or 1.0% of the worldwide gross domestic product (Department for Health, 2013).

The challenge of dementia is well documented (Arai, Arai, & Mizuno, 2010; Banerjee, 2010) and the financial cost to society is not in doubt but the human cost on those living with dementia, on those who care for them, on those who work with them and on their family members, is equally high (Cuijpers, 2005; Pinquart & Sorenson, 2003). As dementia develops, a wide range of mental abilities gradually diminish and memory loss, inability to carry out basic tasks, changes in personality and behaviour, increased levels of agitation and sometimes aggression often become more apparent. However, as a result of previous studies, we know that a number of musical skills are amongst the last to disappear. Musical memories, words to songs and associated feelings and emotions appear to remain for significant periods of time after other skills have disappeared (Crystal, Grober, & Massur, 1989;

Nuki, 2009; Yamada & Baba, 2008). Okabe and Kobayashi (2006) demonstrated that two regular weekly sessions of musical activity positively affected levels of communication, interaction, eye contact and concentration in persons with dementia and numerous additional studies have demonstrated how engagement with music can significantly reduce levels of anxiety and agitation (see Cooke, Moyle, Shun, Harrison, & Murfield, 2010; Lai, 2004; Ledger & Baker, 2007; Lin et al., 2011; Sung, Lee, Li, & Watson, 2012; Vink et al., 2013), reduce levels of depression, (Ballard, Bannister, Solis, Oye-bode, & Wilcock, 1996; Butters et al., 2008; Chou & Lin, 2012; Jorm, 2001), reduce wandering, (Robinson et al., 2007) and assist transition into long-term care (Kydd, 2001).

As well as exploring the impact of music on specific behaviours, the improvement in the overall well-being of those living with dementia is similarly well documented (Brotons, 2000; McDermott, Crellin, Ridder, & Orrell, 2013; Sherratt, Thornton, & Hatton, 2004; Sixsmith & Gibson, 2007; Sung et al., 2012), with further studies exploring the benefits of music on caregivers (Brotons & Marti, 2003; Davidson & Faulkner, 2010; Hammar, Emami, Engstrom, & Gotell, 2010; McDermott, Orrell, & Ridder, 2014). In particular, music therapy has a long history and association with dementia research (Aldridge, 2000; Kadouchi, 2001; Moroi, 2007; Ridder & Aldridge, 2005; Spiro, 2010) and further work has demonstrated a number of innovative ways of using music in order to enhance the care of individuals with dementia (e.g. Yasuda et al., 2006).

In part, as a result of the work carried out in a variety of academic disciplines, music is becoming an increasingly important non-pharmacological part of dementia care. There

is a growing body of evidence to suggest that taking part in, or experiencing music is highly inclusive and produces significantly increased levels of well-being relative to other activities (Hicks-Moore & Robinson, 2008). Responses from those individuals who live with dementia, their caregivers and their families suggest that engagement with a wide range of musical activities continues to be rated highly amongst the various activities enjoyed by residents in most care facilities and the reported evidence strongly suggests that the ability to enjoy and engage with musical elements in a meaningful way, remains strong even after other cognitive abilities (e.g. language and social skills) have all but disappeared (Davidson & Almeida, 2014; Gold, 2014; Osman, Tischler, & Schneider, 2014; Sixsmith & Gibson, 2007). Partly as a result of this, within the UK, there is an increasing number of organisations and charities providing high levels of support in order that individuals in hospitals and care facilities can benefit from musical experiences. (See for example 'Music in Hospitals' [[www.musicinhospitals.org.uk](http://www.musicinhospitals.org.uk)] and 'Singing for the Brain' [[www.alzheimers.org.uk/site/scripts/documents\\_info.php?documentID=760](http://www.alzheimers.org.uk/site/scripts/documents_info.php?documentID=760)].)

Therefore, as previous studies suggest, the use of music, and in particular live music (Camic, Williams, & Meeten, 2011; Holmes, Knights, Dean, Hodgkinson, & Hopkins, 2006; Sherratt et al., 2004), can be a beneficial and effective non-pharmacological intervention that increases both the quality of nursing care, as well as the overall well-being of those living with dementia. However, McDermott et al. (2014) point to the relatively limited number of studies that have been carried out from the perspective of all those involved in the care of individuals with dementia and highlight the value of '*sustaining the musical and interpersonal connectedness particularly when the progress of dementia becomes more prominent...*' (p. 716). Therefore, the case for further research is well made. However, we would also add that the number of studies carried out from the perspective of music psychology, rather than music therapy, is equally limited. One of the main differences in approach between these two disciplines is that music therapy tends to be specifically designed to be person centred and is often carried out in small groups with the exclusive aim of producing a beneficial/positive outcome in the individual. In contrast, music psychology tends to focus on the impact of music on people, either as individuals or in large populations, with negative responses being seen to be equally important and interesting as positive responses (see for example Ballard & Coates, 1995; Johnson, Jackson, & Gatto, 1995; Litman & Farberow, 1994; Rustad, Small, Jobes, Safer, & Peterson, 2003; Wingood et al., 2003).

In our current study, our key research question asked in what ways can live music concerts influence clients living with dementia, their caregivers and their family members. The research explored the impact that a series of music concerts taking place in care facilities in UK and Japan had on clients with dementia, their nursing and care staff and their families and further work also investigated the effects of the concerts from the perspective of the musicians and performers.

## Method and participants

A series of music concerts were arranged in both UK and Japan. In the UK, the concerts were arranged by a national charity and in Japan, all concerts were sponsored by the care

facilities themselves. A series of interviews were carried out with individual clients living with dementia, their families, volunteer caregivers, nursing staff and care home managers. Interviews were carried out within the care facility immediately following a one hour musical concert. The research team attended a total of 22 concerts, carried out between January 2014 and July 2015. 11 concerts took place in UK and 11 in Japan. A total of six care facilities were used (three in UK and three in Japan). Attendance at concerts was voluntary and all took place within a communal space within the facility.

In the UK, it was not possible to have the same musicians performing throughout the whole series of 11 concerts; therefore, performers were arranged on the basis of availability. However, some degree of repetition and therefore familiarity was possible with 5 pairs of performers doing two of the 11 concerts, but not consecutively. Some degree of control was also possible over a number of other independent variables. First, in terms of musicians, all performers were professional musicians performing as a duet. All performances were sponsored by the same charity and all performers had considerable experience of performing in hospitals, care facilities and engaging with those with dementia. As a result of this commonality, all concerts contained a similar style of repertoire, including instrumental music for listening as well as familiar songs/pieces which residents could join in with and sing, if they so wished. Individual programmes varied in relation to the precise pieces of music but all concerts contained a similar mix of styles with examples from similar genres namely; songs from shows, music from popular films, well known traditional songs and popular items for the western classical tradition.

Second, all concerts lasted for approximately one hour and took place between 2:30 and 3:30 in the afternoon. The one hour duration was adopted in order to both fit in with the natural timetable of the care facility and in order to avoid any issues of fatigue. The early afternoon period was adopted in order to avoid any behavioural issues which can sometimes arise as a result a 'sundowning' (Bliwise, 1994; Gallagher-Thompson, Brooks et al., 1992; Staedt & Stoppe, 2005).

In Japan, controls were possible with relation to time, duration and musical repertoire; the one exception being that the same musicians were responsible for all concerts. However, given the number of care facilities involved and the timetabling of concerts, there was no corresponding increase in levels of familiarity. Concerts in Japan also featured professional musicians with experience of performing in care facilities and working with individuals living with varying stages of dementia. Concerts again took place between 2:30 and 3:30 (local time) and lasted for one hour. The repertoire similarly included songs from the time of the Second World War, classical piano pieces, traditional, community and popular songs/pieces from the culture.

All facilities included musical events as part of their regular activities and therefore the concerts were not necessarily regarded as a novelty. Typical audiences ranged in size from 30 to 47 clients.

All interviews were semi structured and lasted for approximately 20 minutes and all took place within a communal area within the care facility. A total of 53 participants were interviewed, namely: 27 clients (UK-16/JP-11), 13 family members (UK-8/JP-5), 9 members of nursing/volunteer staff and four care/activities managers (UK-5/JP-4). Interview questions covered feelings relating to the concert, overall musical

preferences, impact of the music and reasons for attending the concert. The age of clients interviewed ranged from 71 through to 97 years ( $M = 87.3$ ). All data from interviews were digitally recorded. Data were analysed in accordance with standard qualitative procedures in that keywords, concepts and ideas from participant responses were first recorded on general summative sheets which then enabled the generation of appropriate themes into which responses could be categorised (Robson, 2011; Cresswell, 2013). Ethical approval for the research was given by the UK university. Information sheets outlining the details of the research were provided to all participants along with a request for written consent. Prior consent was obtained from all care facility managers, family members, caregivers, musicians and all nursing staff who were interviewed. All participant clients were classed as having early to mid-stage dementia and therefore gave either verbal or written consent as appropriate to their physical ability.

Clients were mostly able to talk about the concerts relative to other events or activities as well as describing meaningful life events and memories evoked by a particular song, their personal musical preferences and their own musical life. Family members were able to visit and experience the concert alongside the client and were interviewed following the concert. Family members were able to talk about both the differences they observed in their family member resulting from the concert as well as commenting on their own perspective of the concert. Nursing and volunteer staff and managers were able to comment both on the relative changes in behaviour of the clients as well as comment on their own perspectives.

Our results are therefore reported in five themes detailing the benefits (or not) of the concerts to clients, to care staff of the facility and to family members.

In addition to the interviews, open observations were carried out throughout the duration of the concert and recorded as field notes. All recorded observations of behaviours were reported and discussed with either individual client members, nursing staff or family members in order to further explore the context of specific behaviour. In this respect, we were able to establish a degree of reliability in terms of how unique the behaviour was or how frequently it occurred.

Results are subsequently reported within each of the five themes. Themes 1, 2 and 3 relate to responses from clients, Theme 4 relates to responses from care home staff (health workers, nursing staff, volunteers) and Theme 5 relates to responses from families.

## Results

In order to protect their identity, all clients were assigned a number and their comments are reported accordingly. That is, client responses are acknowledged according to their country and unique participant number (e.g. UK5 or JP7). Family members are reported in a similar way (e.g. FM3UK or FM2JP); however, quotes from staff are reported according to their more specific role within the care facility.

### Theme 1: client preferences and behaviours

In common with previous studies (e.g. Brotons, 2000; Crystal et al., 1989), residents in both countries were able to remember musical content and the words of songs chosen from a wide range of styles and decades, whereas according to nursing staff, memories of recent events, news items and daily

routines were remembered less well as a result of the level of dementia. In terms of musical 'preferences', clients did not appear to be significantly selective when joining in with songs and were just as likely to sing, hum or whistle along with melodies and songs from the early 1900s through to the Beatles and ABBA, and with equal enjoyment. However, when responding to questions relating to their musical preferences, their comments suggested that individuals still had clear preferences for both musical styles and individual songs.

UK: 6 – *'Those songs from the National Songbook – reminds me of being back with my friends at school – we used to think they were old fashioned but we like them now'*

and

UK: 14 – *'I am working class and I like working class music.'*

This observation suggests that clients are able to distinguish between 'liking for' and 'tolerance of' musical pieces, as differentiated by LeBlanc (1991), who defined musical tolerance as a willingness to engage with and enjoy a musical event that may not be a musical preference. He further suggested that musical 'tolerance' declined with age, something which findings from this current study may not necessarily support. Certainly, this observation has implications for future studies in terms of how research on musical preferences is operationalised.

Twenty one of the 27 clients expressed a total of 46 preferences for individual songs or pieces of music. These were presented as either direct requests to the performers or stated during the interviews. Of the 46 preferences, 6 related to classical music, that is either to an individual piece, composer or simply using the term 'classical music' and 19 related to 'critical period music' (LeBlanc, Sims, Siivola, & Obert 1996), i.e. preferences for songs or music that was popular during their time as an adolescent. Fifteen related to an individual film or show from any decade, three related to an individual life event or family member, two suggested a song they had heard within the concert and one response referred to a particular instrument and composer. These very specific requests, including the names of films, songs and specific musical instruments, were an unexpected and interesting finding suggesting that musical events experienced during formative years appeared to maintain the same importance amongst individuals with cognitive impairment as they do for healthy individuals.

Compared to clients in the UK, Japanese clients appeared to be more focussed on their choices and preferences and particularly preferred songs which they sang in their late teens or early 20's. The musicians tended to bring a wide variety of music and songs which are well-known generally amongst old people, but requests and more enthusiastic responses tended to be for older songs from their teenage years or early 20s (see also Toritsuka, Suzuki, Hashimoto, Uehira, & Jikumaru, 2014).

JP11 – *'I like listening music which I sang in my early 20's when I was working at factory'*

and

JP3 – *'When I started working in Tokyo coming from other area, I used to listen music by radio which I sang in my hometown, and I am happy today as I could listen again the song ... I did not think I could listen these old songs again in my life ... I just remembered my mum in my hometown.'*

In relation to reminiscences, family members reported that music, more than other activities, appeared to have the effect of promoting past memories of life events, many of which had not been heard before. In common with previous studies (Okabe & Kobayashi, 2006), family members reported that clients often became more lucid, vocal and animated with an increased motivation to talk and interact, not only with members of the family but with other residents. Two nursing staff reported an increased level of talk and interaction following the concert and field notes taken independently by all researchers in both countries recorded an increase in the level of conversation and especially with client initiated conversations.

With specific reference to enhanced communication, one activities manager reported that a major benefit of the music related to the relative difficulty which many men found in communicating with each other. However, increased levels of communication were observed to take place following each performance, an effect that appeared to last for a number of days.

It is particularly good for the men – if we put the women together they will always chat – but the men can find it more difficult – but after the concerts they seem to have more to talk about – it really does help. (UK Staff)

In contrast, three residents were observed demonstrating increased levels of agitation or loss of interest. In each case, nursing staff reported this as being normal behaviour with respect to that individual, however, in one instance, this comment was qualified:

You have to remember that these concerts are at least an hour and that is quite a long time for them – they do very well compared to other activities. (UK Activity Manager)

Behaviours expressing negative preferences for individual pieces included giving a ‘thumbs down’ to a neighbour or the musician, banging a book, trying to leave the performance space and shouting. On four occasions in the UK, we witnessed individuals covering their ears but on each occasion this related to the choice of instrument and not the musical style or piece, in this case, an African Drum.

One further effect of the music on those with dementia related to the absence of, or decrease in levels of unsocial or anxious behaviour. That is, whilst it is customary to look for particular visible responses or behaviours in order to better understand the effect of the music on the individual (e.g. tapping, singing or asking to leave) in three observed instances, the most important indicator of a positive response was a neutral response, more specifically through the absence of an unusual, agitated or antisocial behaviour. For example, the following statement was made by one UK volunteer:

That lady there – she just sits in her room and shouts all day – she can be quite aggressive but when she comes to the concert – look – you would never know.

A further response given by a family member was:

UK: 4 FM – ‘Sometimes I dread coming to visit because they can be so difficult but the music concerts are like pressing a ‘re-set’ button and they tell me more – they don’t argue – they are just much calmer’.

Similarly, one care worker in Japan noted that prior to the concert, clients would often argue about where they would sit. However, the concert they were far more amenable, compliant and easier to care for. Increased levels of agitation and

anxiety also and corresponding levels of negative/antisocial behavior, were also observed to increase during the time between songs. Negative behaviours in this category included shouting, standing, reaching out to touch others, rocking or trying to leave.

Nursing staff reported that some clients were very selective in the activities they attended, however in some instances, the music concerts were the one activity which some residents would volunteer to attend. Neither researcher had consent to interview clients who chose not to attend concerts and, therefore, this data was not available to us. However, nursing staff did report that a high percentage of those who were able to attend, did so on a regular basis.

UK: 9 – ‘Some people in here they love it – the bingo – the quiz – they do all kinds of things but I never used to do that at home so why should I do it in here - but I love all of this music’.

In common with MacDermott, (2014), we experienced that music was often an integral part of an individual musical identity. In addition to showing clear individual preferences, individuals made requests which were directly linked to life events or to individual people and more significantly, these musical experiences remained as a major part of what McDermott has termed, ‘Who you are now’ (2014, p. 711). For example,

UK: 2 – ‘I always sang in the choir and we were always taught that every time you sing – it’s a performance – no matter where you are – so I do’.

and

JP: 7 – ‘Those songs – we sang in the war to cheer up and we all sang them and we all enjoyed them – and it’s the same in here’.

## Theme 2: music and disability

In addition to living with dementia, a number of individuals attending the concerts in our populations were also disabled, blind or physically challenged in ways that limited their movement and coordination. These residents were therefore limited in terms of their ability and opportunity to join in other activities. For these individuals, music was the one unique activity in which they could all take part and both feel and be 100% included. Individuals who were blind or suffered from visual impairment made up around 26% of our population. These individuals were frequently unable to take part in many of the activities arranged for clients by the care facility. Staff members pointed out that they would often try to involve their blind clients by making special provisions however, many residents felt uncomfortable in being singled out and felt they were affecting the enjoyment of others:

UK: 12 – ‘Sometimes – I can join in the other activities a little bit but I don’t enjoy them because I just feel I hold everybody up because I cannot see, but this music is for all of us’.

(Blind resident) Similarly, many of the clients in our sample had limited mobility

UK: 16 – ‘Some people can go out but I can’t, because I can’t walk – so I love all of this music, you can just relax and enjoy it and be in your own world – I feel like I have been out for the evening’.

Two participants suffered from deafness but this did not prevent them wishing to attend or in any way diminish the enjoyment they experienced during the performance. Care staff were always careful to position each individual close to

the performers in order that they could both observe the movements of the musicians but also see the reactions from other members of the audience and when it occurred, they were able to join in physical responses to the music such as hand holding and arm movements with neighbours or staff members.

One additional benefit was observed with two residents recovering from stroke where mobility or movement had been severely restricted. In situations where regular exercise was required in order to prevent muscle atrophy, music proved to be an ideal motivation. That is, in cases of individuals with dementia, some were unwilling to work with a physiotherapist and exercise arms or hands for any significant amount of time. Often, attempts to motivate individuals in this category resulted in increased levels of agitation and in some cases aggression. However, within the context of the concerts, it was possible to see these participants continually moving along with the music and always unprompted. In one instance, one client was limited to movement solely in one arm, and yet 'exercising' that one arm in time to the music was kept up for over one hour – the entire duration of the concert and beyond.

### **Theme 3: musical knowledge – evidence of cognitive activity**

Along with previous work, clients were able to remember the words to songs and join in or would indicate knowledge of the words by smiling at humorous statements in the song. In the case of those clients who chose not to join in with the singing or were physically unable to respond in anything other than a limited way, some evidence of processing musical material could still be observed in what initially appeared to be insignificant movements.

JP: 1FM – 'I can just tell he knows what is going on – he watches every move and you can just – I – can just tell, he is taking it in'.

UK: 4FM – 'Just watch the hand, she will stroke her arm in time to the music without thinking, just watch – she just does it'.

The music also provided an ideal opportunity to explore a number of physical and cognitive functions in those living with relatively advanced dementia who had limited verbal ability. Our observations of individuals with very limited communication demonstrated that music can provide evidence of substantial musical memory and processing which goes well beyond recall of words to songs. Our observation provided evidence that even clients living with the quite advanced stages of dementia were still able to:

- identify and predict patterns in musical pieces,
  - for example, through waving or 'conducting' according to the phrasing of the music and predicting when this will change;
- anticipate endings according to the accepted rules of music,
  - for example, through predicting and reacting to the increase in speed and dynamic towards the end of the piece;
- anticipate and expect changes in tempo,
  - for example, predicting and portraying the pause or variable tempo in the middle of a piece;
- anticipate and expect changes in dynamics,
  - demonstrated by increased vigour or range of hand movements along with increased volume;

- discriminate between a rhythm and a beat – whichever is prominent in the music
  - for example, by tapping or clapping three beats in a bar but then changing to tap out the rhythm of the words, but without singing them;
- recognise the humour or the actions as portrayed in songs
  - for example, portraying the movement suggested by the words (bird flying up into a tree) without having the ability to sing them;
- demonstrate an awareness of how one performance varies from another with which they are more familiar,
  - for example, by predicting an expected, logical and more usual pattern in the music which varies unexpectedly in this individual performance and
- exhibit musical preferences for individual songs and styles,
  - for example, through the increased level of positive reactions and the decreased level of negative responses as well as the level of energy and motivation to join in with preferred songs.

### **Theme 4: staff perspectives**

Interviews were held with a variety of staff/caregivers. Although not all staff were able to attend the performances as a result of their other duties, interviews were still carried out with those who were not at the performance but remained present in the building.

The first common response from caregivers was that unlike other activities for clients, musical performance spread throughout the building in a way that no other activity could and therefore all staff reported experiencing benefits from the performances. Staff working in other areas of the building was frequently seen responding to the music, although they were not directly included in it (e.g. in corridors walking in time to the beat or joining in with songs they knew as they passed through). Comments from UK staff included:

The staff here end up most of their day cleaning up after old people – they get ill – they pass away – it is not the most glamorous job in the world but the music spreads all through the home – they hear it and they hear the residents singing along and it 'lifts' the whole place and I hear them going round humming bits and pieces for the rest of the day.

Staff comments also indicated the strength of music in providing emotional and psychological support, for example:

Many of our clients pass away and if I have to sort through their possessions, I quite often save that job until the musicians are here – because then I can do the job better – emotionally, it affects me less.

With reference to nursing care, the study suggested a number of key benefits which could be gained from the presence of music within the care facility.

First, nursing staff both in UK and in Japan reported on the 'cycle of improved care' that the musicians facilitated:

They talk more after concert, they more content with each other in common room, they respond more to you so you are not so tired and you give some more and they respond more – it goes on, in a circle. (JP Staff nurse)

Almost all staff, nurses and volunteers reported that clients were more cooperative, easier care for and to nurse and were

generally calmer and more responsive following the visit by the musicians. This had the corresponding effect that staff reported feeling less stressful, more cooperative, more caring and overall they also experienced increased levels of motivation, energy and job satisfaction.

Second, music enabled staff in both countries to make different but more importantly, more accurate and more detailed levels of assessment of a number of medical conditions. For example, in the case of one client with respiratory problems and a recurring throat infection, staff were more able to identify her breathing capacity and the extent to which the client was able to use fine motor skills through singing. Simple and non-invasive observations, such as whether or not the client could sing an entire line of the song or if the client could keep in time with the singer, gave key indications as to the current level of muscle control available to the individual. Similarly, for clients recovering from stroke, joining in with musical pieces through the movement of their hands and fingers often gave far more natural and non-intrusive measure of the level of physical activity and motor coordination than the client was able to engage in than other more formal, clinical measures which could frequently be accompanied by increased levels of distress. In this respect, this study supports work done by Yamada and Shimizu (2013) who also commented on the usefulness of using music as an assessment tool.

Staff in both countries also commented on the differences in behaviour between clients attending the concerts and when attending other activities, particularly in terms of attention and concentration span.

In other activities, clients often want to go to toilet but during music concerts they tend to sit quietly and focus more on music concerts compared to other activities. (JP Staff member)

and

The first thing I was told in my training was never to do any activity for longer than 30 minutes and this is true but in the music, they sit here for over an hour. (UK Staff member)

Preti and Welch (2012) noted contradictory comments from nursing staff in their study of music in hospitals; however, within the context of the care facility, we received only positive comments with nursing, administrative and managerial staff all reporting high levels of enjoyment. Certainly, hospitals and care facilities can be very different places and this contrasting result suggests that further research into the nature of musical content could be of interest.

### Theme 5: visitors and families

The musical performances provide some of the most lasting and significant memories and experiences for the families of clients who attend. According to comments made by families, the music stimulated new memories, extended conversations and created/facilitated increased quality visitor experiences and partially restored lost or diminished aspects of personality.

UK: 3 – *'The visits with the music are the best – it gives you new things to talk about – my dad is happier and more communicative – he tells me memories, some I have never even heard before' – it's like getting him back as he was'*

and

UK: 15 – *'I travel up here about once each month and when I go, I always think this might be the last time I see them and when you see the happiness the music brings and you see them joining in with what they love, that is the memory you take away and if that is the last one you have of them, that is wonderful'*

and

JP: 1 – *'My dad always talked to me a lot – then he stopped but after music – he talks again'*.

Previous studies have highlighted the difficulties often experienced by family members when parents or partners are admitted to full time care with feelings of guilt, depression, self-blame and regret often featuring in significant ways (Arai et al., 2004; Arai, Kumamoto, Mizuno, & Washio, 2014; Chang, Kraenzle Schneider, & Sessanna, 2011; Paun & Farran, 2006; Strang, Koop, Dupuis-Blanchard, Nordstrom, & Thompson, 2006). Keefe and Fancey (2000) reported on how family members often continued to carry out caring for relatives for a significant period of time after their admission to long term care. Levesque, Ducharme, and Lachance (2000) reported similar findings but included high levels of guilt in relatives resulting from feelings of failure, whilst Schulz et al. (2004) noted the high incidence of illness amongst individual caregivers following admission to long term care of a loved one. In this study, family members voiced high levels of appreciation for the music concerts due to the fact that these were seen as 'special' and levels of guilt decreased as relatives were seen to be experiencing something they could not have been given at home.

Statements from family carers such as

UK: 8 – *'I could never arrange anything like this at home so I would never really see them THIS happy'*

and

JP: 1 – *'I can go home from this feeling good and knowing I have done right thing...it's better than anything I could provide them with and it's also the fact that you are in a social group so it seems to affect everybody more'.*

Connected with a previous point, several family members also commented on the knowledge and information they received as a result of seeing their partner or parent involved with the music:

UK:16 – *'My father has not been well but today he was clapping and moved around, he couldn't do that two weeks ago so I can see better how much he has improved'.*

Only in two instances over the period of 22 weeks was it noted that clients were removed from the concerts due to a request from family members who, having travelled some distance to see their family member, wished to talk with them away from the community area. Both families, in this instance, viewed the concerts as an inconvenience.

### Conclusion

In conclusion, we would argue that the findings from this qualitative study of musical performances taking place within care facilities, provides further evidence to suggest that experiencing live music concerts provides numerous benefits to all those involved with the care of the elderly living with dementia.

An increasing number of those with people living with dementia also suffer from some form of visual impairment

(Jones, 2007). For these individuals, visual stimulus is not appropriate and many activities, such as playing games or craft activities, are not always possible and yet full engagement in musical activity through listening, singing or playing percussion instruments is absolutely possible. In many cases, engagement with music is one of the very few activities that visually impaired individuals can take part in. We would also argue that musical performance is the only activity to provide significant benefits across the whole range of individuals involved in caring for those people living with dementia.

We argue that this paper contributes to the current body of knowledge by both confirming and extending what is currently known about the effects of music on those living with dementia. First, many of our findings echo those resulting from previous studies (e.g. Gold, 2014; MacDermott et al., 2014; Sakamoto, Ando, & Tsutou, 2013; Sixsmith & Gibson, 2007; Sung et al., 2012), which, in the main, were carried out within the discipline of music therapy. The authors of this paper have no training in music therapy and the interventions were not designed with any therapeutic benefit in mind. Concerts took place and data on their impact was collected whether positive or negative. Our agreement with many of the findings from studies, such as those with more controlled interventions (e.g. Davidson & Almeida, 2014), might suggest that musical events in a variety of guises still appears to produce similar impacts on those involved. Second, we argue that the inclusion of interviews with family members, clients and nursing staff, all within the context of the same series of performances has enabled this study to address a number of the limitations expressed earlier by McDermott et al. (2014).

However, we also acknowledge a number of limitations within the current work which could be addressed in future research. First, all concerts were voluntary and, therefore, the resulting population was to some extent, composed of individuals already pre-disposed to the enjoyment of musical activity. No option was available to us to explore the attitudes of those who did not attend. Second, the interviews took place immediately following each of the concerts and therefore it could be argued that participants were still enjoying temporary increased levels of arousal. We have no direct evidence as to if, or for how long this effect lasted although nursing staff did comment that – ‘they do talk about this for days after – it does give them a lift’ (UK Activity Manager).

Third, although the researchers did become increasingly familiar to clients and care facility staff, it has to be acknowledged that as relative outsiders, it could be difficult for participants to feel sufficiently comfortable to voice any serious negative concerns.

However, Bellelli, Raglio, and Trabucchi (2012) have argued that the cost of musical interventions amount to as little as 1/70th of the costs of daily care, which in many cases is far cheaper than many of the medications from which perhaps one individual may or may not benefit. Certainly, a number of authors have cast doubt on the value and effectiveness of, for example, the use of anti-depressant medication on individuals with dementia (Banerjee, 2013; O’Neill, Freeman, & Portland, 2011), whilst other studies have demonstrated the limited effects available through anxiety controlling medication (Press & Alexander, 2013). Given the findings of this and previous studies, the increasing costs of dementia care to society and the need to consider further the ways in which non-pharmacological interventions can contribute to the process of caring (Petrovsky, Cacchione, & George, 2015; Takata &

Iwanaga, 2014), we suggest that future research in this area could be of significant benefit to all those involved in the care of the elderly.

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## Disclosure Statement

No potential conflict of interest was reported by the authors.

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