

## **The role of participatory music making in supporting people with dementia in hospital environments.**

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### **Abstract**

**Background:** Improving the quality of care for people with dementia in general hospitals is a key priority. Creative activities including music have been examined for their potential role in enhancing quality of life for people with dementia, although relatively few studies have evaluated their use in acute hospital settings.

**Methods:** A mixed methods study examined the effects of a ten week period of weekly music sessions on the wellbeing of patients with dementia and on the ward environment in an acute elderly care service in a UK hospital. Potential effects of the music project on the ward environment were examined by comparing descriptive quantitative ward level data for two equivalent ten week time periods. The impact of the activity on participants' wellbeing was assessed using observational data as well as semi-structured interviews and focus groups with patients, visitors, the musician and staff.

**Results:** Ward level data were available for 85 patients with a dementia diagnosis in total who had stayed on the wards during the study periods. Comparison between the two periods showed a number of differences between the music and the non-music time periods, including a reduction in prescription of antipsychotic drugs. However, a number of factors could have contributed to differences in the ward environment between the two time periods. Observational data revealed nuanced

responses and suggested that participants generally enjoyed the activity. The impacts of music making were mediated strongly by staff responses and hospital organisation.

**Conclusion:** Data from this limited pilot study suggest that music is a useful intervention for enhancing patient and staff experiences and improving care in acute dementia care environments. The suggestion that use of anti-psychotic drugs may be reduced when music is present warrants further research.

## **Background**

Clinical outcomes for the increasing numbers of people with dementia who require acute care in hospital are generally acknowledged as poor (DH, 2009, Dewing and Kijk, 2016). Hospital environments can be very challenging for people with dementia who may find the experience of being in hospital frightening and confusing (White et al. 2017). They may experience boredom and anxiety, as well as pain or discomfort or stress from environmental challenges such as noise, all of which can compound behavioural and psychological symptoms that many will experience as part of their illness (Cerejeira, Lagarto and Mukaetova-Ladinska 2012). A critical challenge is the overuse of antipsychotic drugs, (Banerjee, 2009), as these are associated with an increased risk of falls, increased length of stay and worsened outcomes including deteriorating mental and physical health (Boaden, 2016; Dewing and Dijk, 2016). These negative outcomes are in turn associated with higher costs, and may arise because of a tension between acute clinical care directed at co-morbidities and person-centred dementia care (Dewing and Dijk, 2016). Improving the quality of care for people with dementia in general hospitals is a key component of national policies in several countries including the UK (DH, 2009).

In dementia care, non-pharmacological approaches are often used but are infrequently evaluated (White et al. 2017). Arts and art therapies including music have been examined for their potential role in enhancing quality of life and mental wellbeing of people with dementia (Beard, 2011; Pavlicevic et al. 2015; Raglio et al. 2012; Daykin et al. 2016; Victor et al. 2016; Skingley and Vella-Burrows, 2010). For

people with dementia, music can help to reduce anxiety, agitation and behavioural problems (Gross, Danilova, Vandehey and Diekhoff 2013; Ray and Mittelman, 2015). Music can also promote reflection, communication and connection (Hannemman, 2006; Gross et al. 2015).

Evidence from a recent Finnish randomised controlled study in a community setting found that, when compared with usual care, singing and music listening improved mood, orientation, attention, memory and quality of life in people with mild to moderate dementia (Särkämö et al., 2013). Evaluation of a UK based community singing activity showed high levels of engagement in the activity, with participants with dementia and carers reporting positive impacts on wellbeing (Camic, Williams and Meeten, 2011). Evaluation of participatory singing has reported this as helpful in accepting and coping with dementia as well as providing social inclusiveness and improvements in relationships, memory and mood (Osman, Tischler and Schneider 2016).

Evaluating the impact of music in dementia care is complex (Victor et al. 2016). Existing research tends to concentrate on people with mild to moderate dementia in community settings. Few large scale studies have examined the effects of arts and music for people with dementia in acute hospital settings, which are challenging environments, where staff are extremely busy and where research may seem impractical. A small study of nine hospital patients with dementia observed positive effects on mood and behaviours on days when music therapy took place (Gold, 2014). There is a need for further research to investigate the effects of music as a hospital based intervention for people with dementia, including its impacts on patients and staff and its potential contribution to enhancing patient centred care.

## **Research methods**

This pilot study examined the impact of a ten week period of weekly participatory music in a 54 bed acute care service for older people in a UK hospital. Data were available for 85 patients with dementia who had stayed on the wards during one of

the two periods. The study population for the music project study included 38 patients 12 staff members. On the advice of the lead clinician for dementia care, no distinction was made between the different types of dementia as these diagnostic characteristics do not tangibly influence the clinical care provided in the acute setting. In groups of between five and eight, participants (patients, their care staff, and visitors), attended sessions led by a professional orchestral musician trained to work with people with dementia. As some patients were discharged during the study, each participant received on average two to three music sessions.

The intervention was not described as music therapy, which is often individually based and usually focused on clinical goals (Daykin and Bunt, 2006, 2014) but as an inclusive participatory music activity to support wellbeing. Sessions lasting up to two hours were held in an activity room close to the ward. Each session followed a similar structure, beginning with a brief performance of a classical piece on the viola by the musician, played as participants arrived and as tea and biscuits were being distributed. This was followed by a series of participatory activities, beginning with singing familiar songs and playing hand-held percussion instruments. Reminiscence was one element, and activities also included songwriting and composing, and participants were invited to conduct using a baton as the musician improvised in response.

In an exploratory sequential mixed methods design (Johnson, Onwuebbuzie and Turner, 2007), qualitative data were collected during the project to explore its impacts on participants, while secondary quantitative data collated at the end of the project to examine possible impacts on the ward environment. Descriptive quantitative ward level data were compared for two equivalent ten week time periods: 1<sup>st</sup> September to 3<sup>rd</sup> November 2014 (time frame A – usual care, with no music activity) and 1<sup>st</sup> September to 3<sup>rd</sup> November 2015 (time frame B – weekly two hour music sessions). Observational data, semi-structured interviews and focus groups with patients, visitors, the musician and staff were used to assess the impact of the activity. Participation in interviews was open to all consented patients with a

diagnosis of dementia admitted to the wards over the 10 week period where music was present (time B).

The research was approved by the NHS South Central (Hampshire A) Research Ethics Committee and by the University of Winchester Research Ethics Committee. All members of the research team completed Good Clinical Practice Training, including modules on ethical and scientific quality standards in clinical research and informed consent with adults lacking capacity. The Principal Investigator and the field researchers worked under honorary contract with the NHS Foundation Trust. Members of the research team were accompanied by clinical staff at all times and did not accompany patients or the musician into ward or private areas of the hospital.

On admission, patients were invited to take part in the study by the dementia care clinical nurse specialist (CNS), who also took consent/assent. Written information about the study was provided in the form of separate participant information leaflets for patients, carers and staff. Where a patient lacked the capacity to consent, consultee agreement was obtained. It was made clear that participation was voluntary and that if an individual declined to take part in the research this would not affect their care in any way and they would still be able to take part in the music activity.

### **Quantitative data collection and analysis**

Researchers analysed routinely collected quantitative data on falls, average length of stay, prescriptions of anti-psychotic drugs and need for one to one attention. Anonymised data were provided by the NHS Trust's business intelligence unit or collated at ward level. In addition, observational data were collected using the Arts Observational Scale (ArtsObs) (<http://www.cwplus.org.uk/research/arts-research/artsobservational/>). This is a structured assessment tool that allows observers to record the impact of activities on participants' mood, distraction and relaxation. These impacts are scored on a scale of 1 (no benefit or negative impact) to 3 (very positive impacts for individuals and the ward atmosphere). The tool also

allows recording of individual participants' happiness scores at the start and after the activity on a scale of 0 (negative, angry response) through to 7 (happy and excited).

Quantitative data were analysed using descriptive statistics to illustrate the frequencies of ward characteristics before and after the intervention. This analysis was used to identify any potential differences that might indicate project impacts.

### **Qualitative data collection and analysis**

Unstructured observation of ten music sessions was undertaken unobtrusively by one of two researchers. Each week the researcher arrived twenty minutes early to observe the preparations. During the sessions they joined in with the music and singing, chatted with patients and staff and helped with simple tasks such as serving tea. They recorded detailed field notes after each session.

In addition, a total of nine brief conversational interviews of up to 20 minutes duration were undertaken with participants, sometimes with a carer present, either immediately after the session or a short time later. They were held in the activity room, away from the ward, and the environment was on occasion hectic. A topic guide was used to explore participants' accounts of the music project. Participants tended to give short, fragmented answers and needed frequent prompts. They often struggled to remember what they had done during the session and other difficulties, such as hearing impairments, affected their ability to take part in the interviews. Some declined to be interviewed, for example if they were feeling anxious or agitated or needed to be seen by a doctor or were keen not to miss their visitors. This affected engagement in qualitative data collection, meaning that some participants were unable to be interviewed.

Of a total of 12 staff members who actively supported the music sessions, six took part in a final focus group facilitated by two researchers. The group discussed participants' responses to the music sessions, the organisation of the sessions, and the project's impact on themselves and on their working environment.

Qualitative data were audio recorded and transcribed in full and identifying details were removed prior to thematic analysis (Braun and Clarke, 2006), assisted by NVivo software. Qualitative analysis followed principles of analytic induction (Silverman, 2011), treating data comprehensively, employing the constant comparative approach and searching for disconfirming cases regarding emerging themes and interpretation.

Data analysis was led by the lead researcher with validation provided by a second researcher. This was an inductive process that emerged from the data and not from a priori assumption. Each researcher coded segments of data, keeping in mind not just what happened and what was said but also drawing on sensory awareness (what was seen, heard, how did it feel, what did it sound like) as well as understanding the context and social relations that shaped the project. After initial coding, researchers met to compare notes and agree a framework for secondary coding and categorisation. This process was repeated until data saturation was reached.

### Findings from the quantitative data

Ward level data were available for 85 patients with a dementia diagnosis in total who had stayed on the wards during the study periods. During the usual care time period A, 59 patients out of the total ward population (in-patient population plus discharges) of 164 had a dementia diagnosis (36.98%) compared with 84 patients out of the total ward population of 176 during the music project time period B (47.73%).

**Table 1: Ward population**

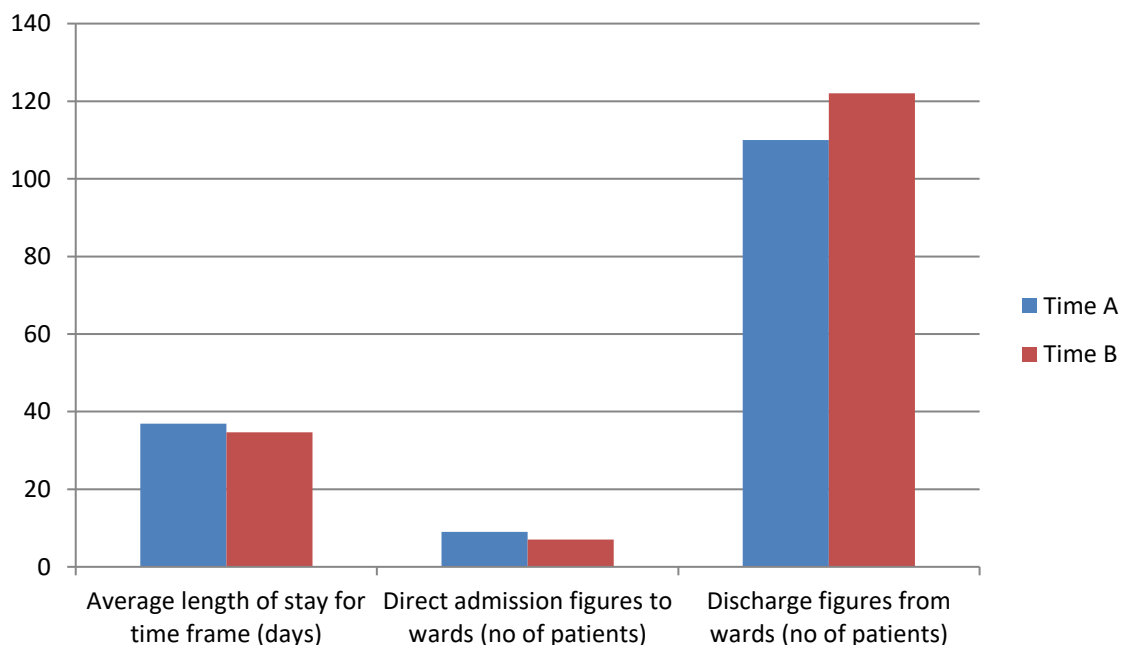
	Time A	Time B	Time A to Time B comparison
Bed occupancy (total bed number: 54)	100%	100%	
Total patient numbers	164	176	increase
Patients with dementia diagnosis	59	84	increase

During period A, data were available for 38 out of 59 dementia patients admitted (64.41%), while during time B, data were available from 47 out of 84 dementia patients admitted (55.95%).

Although the two time periods were equivalent in terms of time of year, it is recognised that many factors could have contributed to differences in the ward environment between them. For example, the average age of patients with dementia during time A (no music) was 80 years old and 91 years old for time B (music).

Comparison between the two periods shows that during time B there was a small reduction in the average length of stay and an increase in the overall number of discharges compared with period A (Figure 1). The average length of stay during time A was 36.90 days compared to 34.68 days in time B. This equates to a 6.2% decrease in length of stay between the two time periods. The discharge figure from the two wards was 110 in time A, compared to 122 in time B; this is a 9.84% increase in the number of discharges.

**Figure 1: Length of stay, direct admissions and discharge figures**





The ward level data record of patient behaviour including the need for one to one attention, agitation and prescription of anti-psychotic drugs (Figure 2). During time A, one patient (2.63%) required one to one attention compared with two patients (4.26%) in time B. The data in Figure 2 show a 4.26% decrease in the number of patients prescribed anti-psychotic drugs in time B compared with time A. Further, there was a 27.72% decrease in the number of prescribed anti-psychotic drugs on a Tuesday (the day of the music activity) in time B, compared to time A. The number of patients who took anti-psychotic drugs during their stay but not on a Tuesday was one (2.63%) in time A and 15 (31.91%) in time B.

**Figure 2: Markers of behaviour**

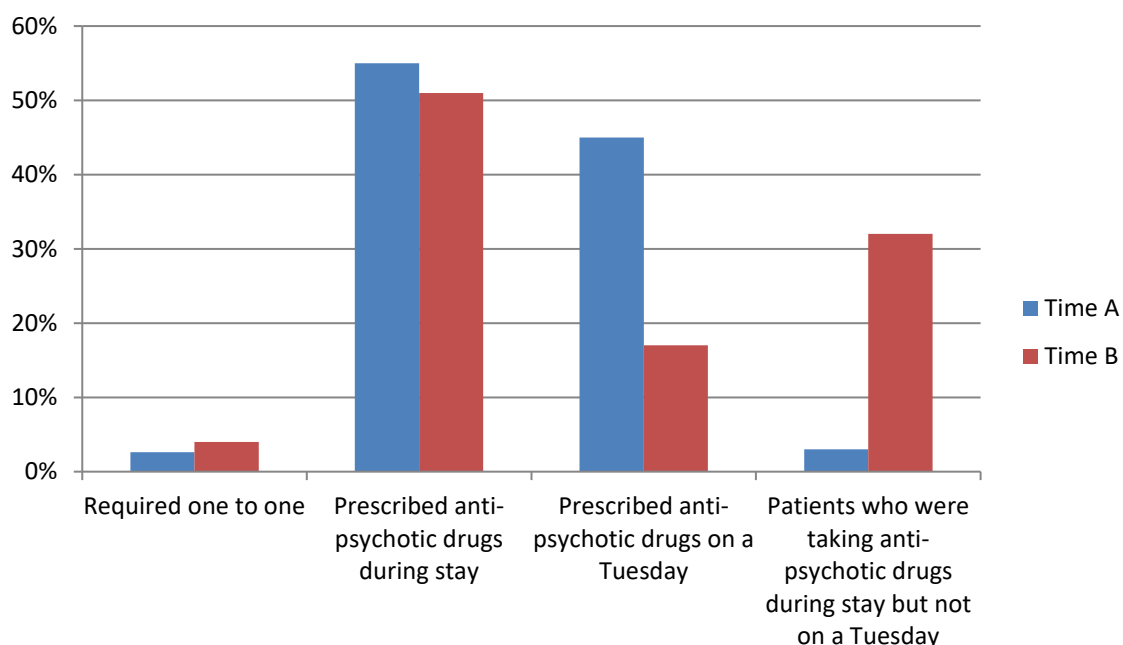


Table 2 shows a reduction in the number of falls recorded overall across the two time periods: 47 in time A compared to 31 in time B.

**Table 2: Falls recorded**

	Time A	Time B	Time A to Time B comparison
Average number of falls recorded on a Tuesday during time frame	6	7	increase
Total number of falls recorded during time frame	47	31	decrease

The data in Table 3 show a reduction on staff absences overall, with 22 absences recorded during time A and 16 recorded during time period B. However, the number of staff absences on a Tuesday (the day of the music session) in time A was 6 compared to 8 in time B.

**Table 3: staff absences**

Metrics	Time A	Time B	Time A to Time B comparison
Staff absences during period	22	16	Decrease
Staff absences on a Tuesday	6	9	Increase

Structured ArtsObs data were available for 20 patients (13 female and 7 male), observed over five sessions. Table 4 presents participant happiness scores recorded at the start and after the activity using ArtsObs. At the start of sessions participants showed a range of moods, from angry through to calm and satisfied. All the scores increased by the end of each session (average 1.6 points), with no decreases recorded, and several participants at the end of the session appeared happy and excited.

**Table 4. Happiness Scores Recorded**

	Week 6				Week 7				Week 8			Week 9				Week 10				
	F1	F2	F3	M1	M2	F4	F5	M3	F6	M4	F7	M5	M6	F8	F9	F10	F11	F12	M7	F13
Score at start	5	1	2	5	4	4	4	4	1	4	3	4	4	1	4	3	3	4	5	5
Score after (/7)	6	3	3	7	5	5	5	6	2	7	4	7	6	2	6	6	4	6	7	6
Change in happiness score.	+1	+2	+1	+2	+1	+1	+1	+2	+1	+3	+1	+3	+2	+1	+2	+3	+1	+2	+2	+1

The ArtsObs data also show that the observed effects on relaxation, distraction, engagement and agitation were consistently positive (Table 5). Taking into account staff feedback on the effects of the project on participants once they had returned to the ward, the observer rated the overall effect of the project consistently as being very positive, with a score of 3 for each week that data were recorded.

**Table 5. Impacts on relaxation, distraction, engagement and agitation.**

	Week 6				Week 7				Week 8				Week 9				Week 10			
	F1	F2	F3	M1	M2	F4	F5	M3	F6	M4	F7	M5	M6	F8	F9	F10	F11	F12	M7	F13
Relaxation	3	2	2	3	2	2	3	3	2	3	3	3	3	2	3	3	3	3	3	3
Distraction	3	2	2	3	2	2	2	3	2	3	3	3	3	2	3	3	3	3	3	3
Engagement	3	2	2	3	2	2	2	3	2	3	3	3	3	2	3	3	2	3	3	3
Reduced agitation	3	2	2	3	3	3	3	3	1	3	3	3	3	2	3	3	2	3	3	3

## Findings from the qualitative data

Qualitative data include interviews, observation and the staff focus group. Given the challenges of undertaking the interviews, the observational field notes provide a useful description of what happened during sessions.

Together, the interviews and observational data generated key themes including: mood, enjoyment, engagement, socialising, musical preferences, nuanced responses and flexible music leadership. The observational data also pointed to the importance of staff roles and hospital organisation.

Patients arrived at the sessions in various moods, sometimes positive and upbeat and occasionally in low moods:

*When she arrived, she seemed quite low in mood and said she thought she was going to die. She was very cold and had a blanket covering her. I said that I would close the windows and we would soon have some tea to warm her up. She seemed happy with my reply and seemed to perk up (R2 reflective notes Session 3).*

During sessions, some participants initially appeared to not know where they were or why they were there and not all joined in with singing or playing. Some hummed or smiled or sat quietly and drank their tea or ate biscuits. Participants' engagement may have been affected by underlying health conditions, which included hearing, sight and mobility impairments as well as dementia. However, they generally became more engaged as the group progressed:

*One female patient ... seemed a little confused at the start of the group. However, quite soon she seemed to relax and was able to follow instructions about using and passing on musical instruments, playing the start and stop game, being the wielder of the baton etc. (R2 reflective notes Session 3).*

After the sessions some participants reported that they enjoyed the music and singing:

*I enjoyed the music (P4, male)*

Participants also commented that they enjoyed the social activity that the session afforded:

*Oh I enjoy it, it's like going to the pub (P7, male)*

Not all aspects of the project were enjoyed by everyone:

*I enjoyed the music (listening) rather than the playing (P6, male)*

Some also reported difficulties. When asked, 'what sort of music cheers you up?' one female interviewee responded:

*I don't know, because I'm never really happy (P1, female).*

For some, the enthusiasm generated during the sessions continued once participants were back on the ward. One participant described how he encouraged everyone to sing when he got back to the ward.

*I get them all to sing (P3, male).*

Musical preferences also emerged as a theme during interviews. Some voiced clear preferences for particular pieces of music, while others seemed aware that their preferences would change depending on the moment. Reminiscence influenced musical preferences. When asked about their favourite music during the sessions, one female interviewee responded:

*It's got to be sea music or things connected with the sea. I had a husband who was a sailor and he was a lovely lad, man (P5, female).*

The musician worked quickly and flexibly during sessions to respond to shifts in participants' moods, for example, changing tempo and style to create a more uplifting effect. However, nuanced emotional responses were welcomed by participants alongside 'uplifting' music:

*... (P) requested her favourite piece of music and when it was played, her whole body reacted as she leant back, stretched her neck and closes her eyes. She was completely absorbed in the music and there were tears from her eyes... In the interview, she explained that the music transported her to another time and place and it made her wish she could fly. She said that the music also made her sad that she couldn't fly, but she still enjoyed listening to it (R2 Reflective notes Session 8).*

The impact of staff roles and hospital organisation were apparent during observations. Most staff were very enthusiastic about the project, and several sought to organise their shift patterns so that they could be at work on the day that music group took place. They played an essential role in facilitating the sessions and escorting participants to and from the ward, a labour intensive task that took up to half an hour. There was also strong interest from staff who were not directly involved in the programme but who were often observed peering through the windows and doors, often commenting with pleasure that they had overheard the music playing and come to see what was happening.

The music session sometimes had to fit into hospital routines, for example, when the session was happening in the room where lunch was served, patients were left waiting after lunch rather than taken to and from the ward, which would have been too time consuming:

*Patients who stayed for the music session had been sitting for a long time. They had been waiting for the music session to begin after having had lunch there much earlier (R1 pre meeting notes, Session 1).*

The music activity sometimes clashed with other programmed activities and treatments and was subject to regular interruptions. For example, on one occasion a medical practitioner entered the room mid-session and approached a patient saying, 'Is it OK to check your ears now?' (R1 reflective notes Session 3). On another, a member of clinical staff came into the session to give a patient some medication in front of the whole group (R2 reflective notes Session 8). Eventually, support staff tried to pre-empt these interruptions by putting up a hand-written "do not disturb" sign on the door.

Staff responses to the project were discussed during the focus group. They were keenly aware of the impact of the sessions on participants' moods, and the project was seen as providing welcome distraction for some participants:

*She was a completely different person when she's done that music and that's because a lot of her frustration comes from being bored and not being able to do anything because of her broken hip. That's where her anger comes from ... it's music she loves anyway, she loves classical music (Staff Focus Group).*

Although staff were keen to accompany and support patients, some felt uncomfortable, 'out of their comfort zone', when they were invited to join in with the singing. They also reported surprise with regard to the more creative and innovative aspects of the project such as songwriting, composing and improvisation. They had expected greater emphasis on reminiscence and were pleasantly surprised by seeing participants in a different light. As a consequence, they themselves had become more aware of the different possibilities of music making.

## **Discussion**

The care of people with dementia in hospital is a growing concern (Dewing and Dijk, 2016, White et al. 2017). This study has examined the impact of a music project on the wellbeing of people with dementia in an acute hospital setting. It has also

examined the potential impact of the project on the ward environment, examining data on length of stay, falls, and patient behaviours. Using routinely collected quantitative data available for 85 patients with dementia we compared the clinical environment over two periods: the duration of the ten week music project (period B) and the equivalent period in the same location the previous year where no music activity was taking place (period A).

As previously acknowledged, there are many factors, including patient characteristics such as age and changes in ward management protocols could have contributed to the observed differences in the ward environment between the two time periods. Nevertheless, the quantitative results suggest some interesting trends, especially given that the ward population during time period B (2015) was on average eleven years older than the ward population during time period A (2014). During the music intervention period B, there was a 6.2% reduction in the average length of stay and a 9.84% increase in the overall number of discharges compared with period A, where there was no music activity. There was also a reduction in the number of recorded falls, from 47 in period A to 31 in period B. The data also show a 4.26% decrease in the number of patients prescribed anti-psychotic drugs in time period B compared with time period A. Further, there was a 27.72% decrease in the number of prescribed anti-psychotic drugs on a Tuesday (the day of the music activity) in time period B, compared to time period A.

Given the limitations of the study design, it is difficult to attribute these observed changes in the ward environment to the music activity. A higher proportion of patients during the music project time period B had an underlying dementia diagnosis compared with time period A (47.73% and 35.98% respectively). Whilst the finding that anti-psychotic drug prescription was higher during time period B might therefore be expected, the ward level data suggests that fewer required this medication on a Tuesday when the music sessions were held. The number of patients who took anti-psychotic drugs during their stay but did not require them on a Tuesday was substantially greater in time period B compared with time period A (31.91% and 2.63% respectively).

The structured observational data suggest that the music project was perceived by researchers to have a strongly positive effect on the clinical environment and on the wellbeing of patients and staff. During sessions, observers recorded improvements in mood, and although participants responded with different levels of enthusiasm no observable deterioration in mood was recorded. Observers also recorded positive effects of the project on relaxation, distraction, engagement and agitation. The effect of the project on the general ward environment was also rated as positive, suggesting that the activity was generally liked by participants, bringing about a sense of calm and general wellbeing.

These findings are reinforced by the qualitative themes of mood, enjoyment, engagement, socialising, musical preferences, nuanced responses, flexible music leadership, staff roles and hospital organisation. The data from the unstructured observations further provide a rich and nuanced picture of the project, revealing impacts on wellbeing and helping to understand of the key features of successful music interventions. Importantly, identification of these key characteristics in an acute care environment, will inform future larger scale research. These characteristics include the background, training, knowledge, skill and aptitudes of session leaders, who need to demonstrate high level musical skills, be in tune with the complex needs of participants and have an ability to work effectively with staff from clinical and non-clinical backgrounds. Without a lead musician, staff stated that they would not have been confident to provide participatory music, and the likely alternatives of passive listening or watching TV were viewed as vastly inferior.

The observation data reveal that participants' responses to music were complex and nuanced: they welcomed music that is conventionally perceived as 'uplifting' but also responded to music that elicited a wide range of emotions. As well as delivering appropriate repertoire, the musician needed to strike a balance between familiar music and creative music making. The role of arts in connecting with the past and affirming autobiographical memories is of value in the care of people with dementia (Gross et al. 2015). The project demonstrated that music is certainly capable of



evoking strong memories, thereby affirming personhood and underlying quality of life. However, the creative elements that involved exploring new territory in terms of composition and improvisation were recognised as adding to the strength of the programme, sometimes to the surprise of clinical and care staff.

In this study, the impacts of music making on wellbeing and on the ward environment were strongly mediated by staff responses and hospital organisation. One useful framework for understanding this is that of 'mediated affordances' (Daykin, 2017; Daykin, DeViggiani, Moriarty, & Pilkington 2017), which is linked to the notion of musical affordance (DeNora, 2000) and demonstrates how the impact of this music making project was shaped by factors such as staff engagement and hospital organisation. The clinical and care staff who took part in the study demonstrated enthusiastic support for the project, sometimes seeking to organise shift patterns in order to be able to support the sessions and striving to protect the time allocated to music and the special atmosphere it generated. Some staff who were unconnected with the project expressed interest, dropping in to visit sessions or pausing for a moment at the door to listen to what was going on. This is perhaps evidence of a 'ripple effect', a contribution to a changing culture within the hospital that supports person-centred care by expanding identities beyond the medicalised (Pavlicevic et al. 2015). However, power relationships and hierarchies all played a role here, with clinical imperatives frequently outranking musical ones. Perhaps the most critical factor was the responses of the musician who needed to adapt to participants' fluctuating moods and diverse preferences while sensitively negotiating relationships in a complex multidisciplinary environment. Further research is needed to understand the personal, interpersonal and social factors that mediate wellbeing outcomes from music and arts interventions.

### **Strengths and limitations of the study**

This study used an innovative methodology to record ward level data that can potentially demonstrate effectiveness and efficiency of arts based interventions in acute hospital care. The data were collected over two different time periods, these time periods being one year apart. It was beyond the scope of this pilot study to

seek out detailed data in each time period of patient characteristics including gender, diagnosis or stage of dementia, other health conditions or impairments and medication. Hence numerical analysis did not control for any confounding variables and possible differences in the ward environment, besides the music intervention, were not identified. There was no matching or control group and it was not possible to assess the effects of the intervention on the same patients by measuring before and after the intervention. Whilst it is recognised that dementia diagnoses can be classified in terms of clinical characteristics, for example Alzheimer's disease, vascular dementia or dementia with Lewey Bodies, lead clinicians in dementia care advise that the distinctions are not as important from a practical, "real life" perspective as they are to medical academia. For people living with dementia it is the non-pharmaceutical aspects of care and support that are likely more important.

Due to the nature of the data collected, it has not been appropriate to run an inferential analysis. Recruitment of a representative and sufficiently large sample of participants in an appropriately powered study, would enable the identification of any significant differences or relationships in the data which may then be generalised to a wider population.

This study has shown, however, the value of using mixed methods to evaluate the impacts of a music project on patients with dementia in an acute care environment. Whilst the project shows that it is possible to interview patients with relatively advanced dementia, interviews with this group may not generate data as rich as would be the case for other groups and so benefits from being supplemented with other methods, particularly observational methods. Where it is not possible to undertake extensive qualitative methods the study has shown that structured tools such as the ArtsObs offer a relatively quick and efficient way of recording some tentative impacts as well as documenting process issues.

Focus groups were designed to promote critical reflection, and researchers stressed that the study aims were not simply to generate positive examples of benefit of the intervention, rather to explore the impact of the music project more broadly,

addressing what works and what does not work. In practice, staff were very open to discussing all aspects of the music intervention, hence this did not appear to be a limitation of the qualitative methods used.

## **Conclusions**

This pilot study allowed an exploration of ward level characteristics that may be useful objective indicators of effectiveness and efficacy in acute hospital care of people with dementia. Data suggest a trend towards a decrease in the number of patients requiring anti-psychotic drugs following a participatory music intervention. The results also suggest that fewer falls were recorded on the days when the music sessions were taking place and that overall length of stay was reduced despite the average age of in-patients being higher when the music sessions were running. However, without more specific data on patients it is not possible to know whether these observed changes are attributable to the music sessions.

Qualitative data show that music activities are strongly supported by clinical and care staff who perceive them to be beneficial for patients' mood and wellbeing. However, hospital routines and imperatives can impinge on music activities and limit outcomes. Patients in this study responded enthusiastically, albeit in nuanced ways, to a music project that combined elements of reminiscence with the opportunity to explore new soundscapes and discover new skills.

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