MUSIC AND DEMENTIA: DEVELOPMENT OF A CONCEPTUAL FRAMEWORK

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The Report of a Project Funded by the Life Changes Trust
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## Appendix 1: Questionnaire

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- Please tell us a little about yourself
- Experience of Dementia and Music
- Relationship between music and dementia
- Evaluation and Future Research

End of Survey

## Appendix 2: Mindmap

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Introduction

The promotion of musical activities and singing groups for people with dementia has been increasing (Clift et al. 2008) and there are many anecdotal reports, case studies and empirical research studies that suggest music affords a benefit for people with dementia (see for example, Bannan and Montgomery-Smith 2008; McCabe et al. 2013; and Spiro 2010).

This evidence purports to demonstrate a direct relationship between the music and the benefit to the person with dementia.

However a brief glimpse at the domain gives a view of the broad perspective of subject area and the complexity that underlies this seemingly simple association.

By developing a conceptual framework identifying all factors that have a bearing on the relationship between music and dementia we hope to enable research in the area that will increase theoretical knowledge and guide best practice.

A Conceptual Framework is the system of concepts, assumptions, expectations, beliefs, and theories that support and inform research, and which explain the main things to be studied— the key factors, concepts or variables— and the presumed relationships between them (Miles and Huberman 1994). The result is a tentative theory of what one thinks is happening and why on which research questions can be based.

This report introduces a conceptual framework, which has been developed based on the opinions of those working with, and/or have an interest in the role of music in improving the lives of people with dementia. The framework has been developed based on the findings of a research project funded by The Life Changes Trust. The project took part in two phases: an initial phase that sought to identify current directions and understandings relating to music and dementia; and a second phase that involved reflection and feedback and input from those who have a specialist interest (either as a service provider or academic) within this field.
Phase 1
Data Collection and Analysis

The research project involved identifying what is currently being done in this field, the benefits and challenges related to music and dementia, and the areas for future research. Information was gathered through an online survey.

The link to an online survey (a copy of which can be found in Appendix 1) was distributed to a stakeholder group and recipients were encouraged to share the survey with others that they felt would be interested. The survey was accessed through Bristol Surveys Online, included predominantly open-ended questions to gather as much information as possible. Ethical approval for the project was granted by the School of Applied Social Science, University of Stirling Ethics Committee on Thursday, 18 December 2014.

A total of 106 responses were gained from the survey. Some descriptive data analysis was undertaken on closed questions relating to the demographics of the respondents.

However, in the main the responses were analysed through a thematic analysis using Nvivo software. This allowed for coding, organising and clustering of data into comparable themes.

An open coding approach was adopted meaning that the themes themselves emerged from the survey responses.

Findings
Overview of Respondents

The survey was completed by 106 respondents. The majority of respondents were female (84.9%, n=90) and as is shown in below there were more respondents aged between 51 and 60 than in any other age banding.
The majority of the respondents were resident in Scotland (79% n=83). As the graph below shows there were also some International responses: from other European Countries (2.9% n=3) and from beyond Europe (3.8% n=4), including the USA, New Zealand and Australia.
Of those responding around a quarter were musicians (24.3% n= 25) and a quarter (25.2%, n=26) were carers for people with dementia, and a small percentage (5.8% n=7) were academics. However 43.7% (n = 45) did not consider themselves to fit into any of the categories set. Those selecting the ‘other’ category described themselves as music therapists, employees for charitable organisations, nurses, service providers for older people and/or people with dementia, or as having a personal interest in the topic.

<table>
<thead>
<tr>
<th>Interested as..</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musician</td>
<td>25</td>
<td>24.3</td>
</tr>
<tr>
<td>Academic</td>
<td>7</td>
<td>5.8</td>
</tr>
<tr>
<td>Carer</td>
<td>26</td>
<td>25.2</td>
</tr>
<tr>
<td>Person with dementia</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>45</td>
<td>43.7</td>
</tr>
</tbody>
</table>

**Ongoing and Previous Musical Projects and Interventions**

Of the 106 respondents, sixty-three (59.4%) suggested that they had been involved in interventions, projects or events that were relating to music and dementia. Thirty respondents (28.3%) noted that they had not been involved in this type of activity, and thirteen respondents (12.3%) did not make comment on whether or not they had been involved. In addition to the projects that respondents were involved in many respondents highlighted additional projects and events that they were aware of.

The following is a summary of the types of project that people have either been involved with or are aware of. To protect the anonymity of respondents, we have not identified which of these are projects that respondents are involved in.

A number of music interventions or projects that were discussed transcend any single setting e.g. musical therapy and individualised playlists.
A further intervention that was discussed, outwith any particular setting, was “music mirrors” (2 respondents). Music mirrors is a process that allows people to reconnect with their memories and feelings through music. Further information on music memories can be read about on the following website: http://www.musicmirrors.co.uk/. Whilst these projects were discussed independently of a particular setting, many interventions and projects were associated with specific settings i.e. within the hospital, within residential or nursing care, within day care, or within a community setting.

**Music in Hospitals**

Fourteen respondents (13.2%) discussed knowledge or involvement within a hospital setting. A breakdown of the items discussed by participants is shown in the table below. Music within the hospital setting primarily occurs in the form of musicians attending and performing.

Further information about ‘Music in Hospitals’ can be seen at: http://www.music-in-hospitals.org.uk/HospitalPatients.html and further details about ‘Music in Hospitals Scotland’ can be seen at: http://www.musicinhospitalsscotland.org.uk/.

In addition to these formal performances, the use of impromptu singing of staff and playing music CDs also occurs within wards, as does formal music therapy.

<table>
<thead>
<tr>
<th>Activity/Intervention/Event/Project</th>
<th>Number of Respondents Noting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unnamed musical programme where musicians attend sessions in wards</td>
<td>6</td>
</tr>
<tr>
<td>‘Music in Hospitals’ / ‘Music in Hospitals Scotland’</td>
<td>4</td>
</tr>
<tr>
<td>Music Therapy</td>
<td>2</td>
</tr>
<tr>
<td>Impromptu singing and playing CDs</td>
<td>2</td>
</tr>
</tbody>
</table>
Twenty people (18.9%) discussed music taking place within residential care settings. Like hospital settings, the most commonly discussed scenario (n=13) was where musicians would attend and undertake performances. These performances were undertaken either by individuals or through organisations such as Live Music Now.

One example highlighted of this was the ‘Wee Drams’ project, which was run in 7 care homes (for further information on the Wee Drams project see: http://www.livemusicnow.org.uk/case_studies/item/67999/date/2013-02-09/title/wee_drams_live_music_now_scotland).

Music within care homes is also provided on a more informal basis, where activity coordinators and/or other staff members arrange karaoke or sing-along sessions (3 respondents). The use of iPods/iPads and playlists for life were also reported to be used to provide music to people with dementia in residential care (4 respondents).

Respondents also discussed how music therapy takes place within care homes (4 respondents). In most cases where music therapy was discussed this was described as taking place in a group session – an example of how this might be run was provided by one respondent:

Groups were open and could admit up to 8 participants. Sessions ran for an hour. A range of accessible pitched and un-pitched instruments were provided for participants to play. The progress of disease and level of function varied considerably within each group, e.g. some individuals were still able to use language, were independently mobile and were able to notice and comment on here and now events whilst others were much more affected, e.g. non-verbal, incontinent, and emotionally labile.
**Music in Day Care**

Fewer people discussed music in a day care setting than in the other settings (6 respondents). However, of those that did mention music within day care most (4 respondents) suggested that music was an “everyday activity”. This includes singing sessions and listening to music as a group or on alone using MP3 player. In addition to these, day care services will also have visits from musicians (2 respondents) visiting.

**Music in the Community**

Half of the respondents (n= 53, 50%) mentioned music projects or events that took place within a community setting. The table below shows the various projects and events that were discussed by the respondents.

<table>
<thead>
<tr>
<th>Activity/Intervention/Event/Project</th>
<th>Number of Respondents Noting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unnamed Community singing sessions</td>
<td>14</td>
</tr>
<tr>
<td>Singing for the Brain</td>
<td>12</td>
</tr>
<tr>
<td>Musical Memories/musical minds</td>
<td>12</td>
</tr>
<tr>
<td>Music therapy</td>
<td>4</td>
</tr>
<tr>
<td>Choirs for people with dementia</td>
<td>4</td>
</tr>
<tr>
<td>Luminate Festival events</td>
<td>2</td>
</tr>
<tr>
<td>Singing Together</td>
<td>1</td>
</tr>
<tr>
<td>Silver notes</td>
<td>1</td>
</tr>
<tr>
<td>Silver brain</td>
<td>1</td>
</tr>
<tr>
<td>Scottish Opera</td>
<td>1</td>
</tr>
<tr>
<td>Scottish Chamber Orchestra</td>
<td>1</td>
</tr>
<tr>
<td>Big Sing</td>
<td>1</td>
</tr>
<tr>
<td>Beat it Percussion</td>
<td>1</td>
</tr>
<tr>
<td>Going to theatre to listen to bands</td>
<td>1</td>
</tr>
</tbody>
</table>

It is clear from the above that there are many projects emerging for people with dementia to engage with music.
This is primarily in the form of singing sessions and groups that are structured to enable people with dementia and carers to share musical experiences with other people with dementia and carers.

It is also worth noting however that musical experiences can be gained through use of non-dementia specific resources, with respondent discusses how they would regularly attend the theatre with their husband to listen to bands. There are also examples of where people with dementia have come together to create choirs that can provide musical experiences that can be enjoyed by the wider community.

For example, one respondent discussed how “The Extracare Charitable Trust” have created choirs across their retirement villages and hold an annual competition of choirs at the Birmingham symphony hall. Furthermore, three people discussed a project with Scottish Opera, which led to a performance and “received a standing ovation”. Further information and finding from the evaluation of this project are provided by McCabe et al. (2013).

**Benefits of Music**
In the survey, we asked people whether they considered that music had any benefit to people with dementia. All but 3 respondents (who did not answer the question) agreed that music was beneficial to people with dementia. The majority (n = 100) considered that music was very much beneficial and 3 noted that music was a little beneficial. The benefits of music can be grouped under several headings as is shown in the table overleaf.

The most frequently noted benefit of music projects is the positive impact on emotion and mood. As one respondent describes, music “reawakens emotions and lifts mood” and as another described it “can be familiar and reassuring, stimulating, calming, or energising”. It can give the person a “sense of safety, contentment and can decrease trigger points of stress and distress”. Furthermore, it is noted that “emotional states can be evoked but also regulated by music, sometimes when other interventions may not be effective”.

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The benefit of music however extends beyond impact on emotion and mood: as is shown in the table above many respondents also acknowledge how music can facilitate communication and social interaction.

Music is “the unspoken language, the universal language” and “facilitates interaction when words are no longer possible”. People are able to express themselves creatively through music but it can also have great impact in supporting the interaction of people with dementia with others. Music makes it “possible to share experiences with other people, connect with friends, carers and strangers”.

As one respondent described, “I put on Rock and Roll, around the clocks by Bill Haley, it’s 60s stuff and when he hears it I take his hands and I pretend to Jive, he LOVES IT and it gives him a little fun”.

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion and Mood</td>
<td>52</td>
</tr>
<tr>
<td>Communication and Social Interaction</td>
<td>46</td>
</tr>
<tr>
<td>Memory stimulation and regeneration</td>
<td>38</td>
</tr>
<tr>
<td>Neuro-cognition</td>
<td>11</td>
</tr>
<tr>
<td>Physical and Health</td>
<td>18</td>
</tr>
<tr>
<td>Reminiscence Tool</td>
<td>15</td>
</tr>
<tr>
<td>Personhood</td>
<td>15</td>
</tr>
</tbody>
</table>

Through music it is possible not only to provide something that is enjoyable but also something that can encourage physical movement and promote improved health and well-being.

As was summarised by one respondent “they move their feet, hands, arms, head, eyes, mouth and dance. This is beneficial for those who remain seated for the majority of the day”.

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There was a perception that this movement can help with mobility, coordination and with preservation of motor skills. Yet there was a belief that music can bring wider benefits to the health and well-being of people with dementia. As one participant summarised music can “help lower blood pressure, reduce stress, improve mood and wellbeing and give a sense of belonging”.

The sense of belonging was something was central under the theme maintaining personhood but it is important to bear in mind that this survey suggests music can present the opportunity to learn new skills and have feelings of achievement. It can help to “raise confidence”.

Some respondents felt that there were neurological or cognitive benefits associated with engaging with music. It was noted that music “can slow down the process” and decline associated with dementia. It has the ability to promote improved cognitive functioning - “there is a growing body of information suggesting music therapy can help repair and reorder brain function”. It provides cognitive stimulation as the following quote from one respondent acknowledges: “the flow of words aids memory, songs sometimes connect to a time or place and this stimulates thought and experiences”.

The ability of music to facilitate the recall of memories is something that was discussed by many of the respondents within this survey. Given this benefit, it is therefore not surprising that music has a further benefit of being able to be used as a tool to support reminiscence projects.

Overall this research has shown that there are many benefits that might be experienced when people with dementia engage with music. Given the benefits indicated by respondents it was not surprising that 90 respondents felt that music should be offered as either an adjunct treatment, or as a therapy for people with dementia.
**Mechanisms of Impact**

We also asked people to try and explain the mechanisms that explain the existence of those benefits. Many respondents indicated that they could not explain the reasons for the benefits gained from music by people living with dementia.

As the table below shows, of those that did respond psychosocial explanations were the most common. There were three key aspects discussed within this theme.

One related to the connection with being part of a group and as one respondent explained the “sense of belonging to a group (of people with similar tastes) stimulates positive (and sometimes negative) feelings and memories”.

The second psychosocial explanation was that the benefits were explained at a spiritual level “which may not always be understood”. The third aspect related to emotions and how the emotional response to “songs or hymns that [people] are taught as a child” we are able to remember.

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychosocial</td>
<td>22</td>
</tr>
<tr>
<td>Neuro-cognitive</td>
<td>11</td>
</tr>
<tr>
<td>Physiological</td>
<td>5</td>
</tr>
</tbody>
</table>

Although none of the respondents were able to elaborate on why emotional reactions to music might trigger a response to music, it is possible to explain this with consideration of the general literature relating to memory.

Several papers (e.g. Sharot and Phelps 2004; Cahill and McGaugh 1998; Canli et al. 2000; Osaka et al. 2013) look at the neuroscience of memory and emotion.
Although not focused on people with dementia, consideration of this wider literature can help in supporting the theory that there is a potential neuro-cognitive explanation as to how the psychosocial factors (and in particular the emotional experience) will promote benefits in terms of both memory formation and memory recall.

Some of these explanations were highlighted by respondents to this survey. It was suggested that the mechanisms are at the neural level and that music “increases the neuronal ‘bank balance’ so that cognitive decline is attenuated”.

Others however suggested that the benefits are seen because music triggers part of the brain that “seems to be retained after other parts of the brain function are lost”.

Only one respondent indicated, which brain structures might be involved and they suggested that the amygdala might play an important role in the benefits that are experienced.

The final explanation of how music can be beneficial was at a physiological level. This might be associated with “hormones that are released during singing”, which might act as a “kind of oil to the links”. Alternatively the benefit might be considered to be associate with “feeling the rhythms and sounds” or through a “body memory” for different events.

The survey provides some insight into the different mechanisms that might explain the benefits of music for people living with dementia. However, it is important to note that the detail surrounding these explanations was limited and further investigation would be required to fully appreciate the benefits of music that have been suggested in this survey and evidenced in previous pieces of research.
**Best Form of Music Intervention**

When asked about the best form of music to present to people with dementia, there was a lot of variation in response and often people would mention contrasting approaches e.g. both passive and active engagement opportunities should be available; group based and individual based approaches should be available.

The explanation given for this, and something that 39 respondents suggested, was that any use of music must be matched to the individual and take on board cultural and personal preferences of the recipient if it is to be beneficial.

<table>
<thead>
<tr>
<th>Characteristic of Intervention</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflecting personal and cultural preferences</td>
<td>39</td>
</tr>
<tr>
<td>Active engagement</td>
<td>25</td>
</tr>
<tr>
<td>Group based</td>
<td>21</td>
</tr>
<tr>
<td>Individual based</td>
<td>14</td>
</tr>
<tr>
<td>Passive recipient</td>
<td>10</td>
</tr>
<tr>
<td>Background or supplementing other activities</td>
<td>9</td>
</tr>
<tr>
<td>Generation/Age specific music</td>
<td>5</td>
</tr>
<tr>
<td>Involves carers and family</td>
<td>5</td>
</tr>
<tr>
<td>Live music</td>
<td>4</td>
</tr>
<tr>
<td>Run by music therapists</td>
<td>4</td>
</tr>
<tr>
<td>Occurs as a special event</td>
<td>3</td>
</tr>
<tr>
<td>Intergenerational</td>
<td>2</td>
</tr>
<tr>
<td>Led by musicians</td>
<td>1</td>
</tr>
<tr>
<td>Structured</td>
<td>1</td>
</tr>
</tbody>
</table>

**Challenges in the Provision of Music**

Respondents to the survey, identified a number of different challenges in the provision of music interventions, and projects for people with dementia – these can be grouped under five key themes.
Challenges in Provision | Number of Respondents
--- | ---
Financial | 39
Practical | 32
Awareness of Others | 23
Achieving an individual approach | 16
Negative impact on participant | 7

It is perhaps not surprising that the key challenge identified in respect of the provision of music interventions and projects for people with dementia are financial. Respondents indicated the challenge of funding such projects. Without sustainable funding there have been occasions where music activities had to be “discontinued on cost grounds”.

A potential contributory factor in the difficult of gaining funding is that there “is not enough evidence that [music] has a long-lasting effect and research hasn’t yet been able to prove an economic argument”.

Not all music needs to be expensive to implement and it is clear from the findings from this survey that there is potential benefit to passive experience of music and having music in the background. This is illustrated nicely in the following example provided by one of the respondents:

I enjoyed playing a CD of 40’s war songs to a group of nursing home residents, many of whom had dementia. The mood in the dining room was bright and jovial with many of the residents singing along and interacting well with staff. A carer entered the dining room and decided to change the music onto the local radio station which played modern music. The mood in the room changed instantly with many of the patients reverting to their previous state.

This quote not only illustrates the impact music might have but also how there is a need for people to have an awareness of the role music might play in both creating a positive atmosphere and in lifting the mood of people within the setting.
Music can both lift mood but it can also stir negative memories and reactions, and there is a need to consider how noise sensitivity might also impact on the outcomes for the person with dementia.

These negative consequences of music may be “uncomfortable” for some carers and there may be a need for further training around this issue. Yet raising awareness more generally about the role of music is something that needs to be addressed -staff need to “understand the power of music and allow it to work its magic, rather than switching it off as some staff do”.

Alongside the aforementioned difficulties there are a number of practical difficulties that might be faced. One of the most frequently discussed challenges was finding people to run specific music projects, or events for people with dementia. These projects need “the right person to lead who can put people at ease” and who have an awareness of dementia. There is a challenge in “educating the musicians to understand the needs of people with dementia, and the means to establish successful relationships”. Respondents further discussed how within group settings it can be difficult to accommodate individual preferences for music and how people personally engage with music.

For some, there may be a preference to experience music as they always have done. We need to recognise that there are further challenges associated with supporting people to “stay connected to things they used to do rather than go to specific things with a “dementia” label – but this will mean wider society being more tolerant”. To this effect, enabling people to engage with music as they used to is closely associated with the creation of dementia friendly environments.

Overall, there are a number of barriers and challenges that need to be considered when thinking about how we can bring music into the life of somebody living with dementia.
Phase 2: Evolution of Findings
Data Collection Methods and Analysis

The second phase of the research involved presenting the findings (as detailed above) to two groups who had come together to discuss the field of music and dementia.

One group, of around 19 people who brought music into the lives of people with dementia, met at a stakeholder group meeting organised by The Life Changes Trust. The group included a mix of music therapists, community musicians, and people working for organisations delivering music interventions.

The second group, consisted of 6 people that formed an informal working group that has an interest in moving forward the field of music and dementia. It included musicians, and representatives from organisations/academic institutions that had an interest in this field.

Those attending both events were invited to provide feedback and comments on the report. Those attending the initial event were also encouraged to prepare a mindmap that summarised what they considered, from their experience and understanding to be the most salient points about music and dementia.

All comments and mind maps were reflected upon in terms of the findings from Phase 1 and an overarching mindmap (see Appendix 2) was produced to encapsulate the findings from both phases of the research.

Key Evolutions of Findings

A number of additional points were identified following the discussions held and mindmaps produced during Phase 2 of this project. These points related to the idea that we should think of musics in the plural; the consideration of individual preferences and biographies, the benefits of music, and training and raising awareness.
**Musics not music**

Throughout the feedback and responses it emerged that in discussing music and dementia there is a need to think about music in the plural. There are many types of music that might have beneficial impact when brought into the lives of people with dementia.

For example, music can occur with differing structures i.e. rhythm, instrumental, signing. It can be delivered to the person with dementia as background music through a recorded medium or it can be in the form of live or recorded performances to people with dementia.

Alternatively music can be engaged with at an interactive level as is the case in many community music sessions or through music therapy. Still at another level people with dementia can be central in the creation and performance of music – the role here is on the delivery of music to others. These multiple dimensions at which music can be accessed and enjoyed by people with dementia is such that rather than speaking of music and dementia, within this field we should be referring to musics and dementia.

**Matching the music to individual preferences and biographies**

This key point is one that emerged within Phase 1 but something that evolved further in Phase 2 of the research. It was emphasised that the way in which music might be experienced, and indeed the mechanisms through which music might bring about impact, can be affected by the biography of the individual and how they might have experienced music in the past.

For example, it may well be that a musician or composer might interpret, engage with and react differently to a piece of music than a social listener. These varying depths of involvement with music need to be recognised but similarly it is important to consider that the breadth of the music provision should also be respected.

Some people will throughout their lives have engaged in music at an individual level, whereas others will have preferred to engage with music at a social level.
Recognition of the possible continuation of preferences in this regard must be considered, with music being accessible to people with dementia across a range of domains.

Opportunities for music must equally be diverse enough to encapsulate other factors in an individual’s biography that might impact on interaction and engagement with music including, but not limited to, spiritual/religious links to music, gender, class and generation; as it does the stage of dementia and extent to which their dementia has an effect on the level at which music is engaged with.

**Benefits of musics**

The benefits of various forms of music were discussed during these meetings and in the main these reflected those benefits that had already been identified in Phase 1 of this project. There was additional emphasis from these meetings on the impact that musics can have for those beyond the person with dementia.

For example, benefits for family members and family carers who may derive improved psychological wellbeing when the person with dementia engages with musics.

Similarly, within care environments there might be a positive impact upon care staff and the general atmosphere within the environment. Engagement with musics for and with people with dementia have the opportunity to uplift the mood and spirit of all those within the environment.

**Training and raising awareness**

Whilst those taking part in this research were constant in their agreement of the potential benefits that can be brought around by music, it was acknowledged that there was often a lack of wider awareness of these benefits.
Some of those taking part in the group sessions commented on how within hospital and care settings often there was a lack of appreciation as to why music was beneficial, and a preference for “pills” over art-based interventions.

The raising of awareness within these settings was seen as beneficial to facilitate music being brought to the lives of people with dementia.

More widely it was felt that raised awareness, which is supplemented with an increased evidence base, was required at a policy level to secure additional funding for work in this field.

At a more individual level, it was felt that there was a need to raise awareness of people who were wishing to be involved in working in this field. The perception being that identifying and gaining access to musicians who are aware of dementia was difficult.

**Conclusion**

From this research, it is clear to see the complexities of this domain. Music cannot be seen as a single entity but as a variety of different stimuli, being engaged with at different levels and in different settings.

At a simple level, it is possible to think about the relationships between music and dementia as a series of cogs: the music, the right environment, the deliverers and collaborators, the mechanism of impact, and the individual biography and reaction (see diagram below).

We can hypothesise that when each of these cogs is in alignment positive outcomes can be created for people with dementia, as well as others within the environment.
Central to understanding those relationships is the importance of the person with dementia, their needs, preferences and biographies.

The mechanisms for impact will differ according to the individual, their background, personality and cultural context, and environmental influences need to be matched with individual needs.
The forms of music available must be sufficiently diverse to allow an appropriate selection for each individual with dementia.

This conceptual framework provides a starting point for capturing the complexities of the factors that influence the impact of musics in the lives of people with dementia. In its current presentation it provides information on possible linkages around each of the five key areas.

The information presented is limited to the knowledge of those taking part, and whilst achieving full stakeholder representation, further detail and knowledge existing on each of these factors and linkages may be available within the wider research literature.

Future realisation of the full potential that music can afford on the lives of people with dementia will require sustained effort in two separate areas. The primary function of this framework is for it act as an anchor for a co-ordinated in depth research effort which aims to understand the details of why and how and the mechanisms of the beneficial aspects of music are brought about.

Secondly for the successful implementation of music into the lives of people with dementia service providers will not only need to understand the complexity of the area as detailed in this work but also address the challenges that can impede implementation e.g. funding issues, lack of awareness and lack of suitable collaborators and deliverers. For progress in this field these two areas will need to proceed in parallel; this conceptual framework provides the basic understanding from which progress will be made.
References


Appendix 1: Questionnaire

Music and Dementia

We would like to invite you to complete our survey on music and dementia. We are interested to hear what your experiences and opinions are about the relationship between music and dementia.

Within the survey we will ask a number or open ended questions, where we invite you to include as much or as little detail as you would like to provide. The findings from the survey will be analysed to develop a framework that can be used to inform future research and develop services for the future. Thank you for taking the time to complete the survey.

Prof. Emma Reynish (emma.reynish@stir.ac.uk)
Dr Corinne Greasley-Adams (Corinne.greasley-adams@stir.ac.uk)

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Please tell us a little about yourself?

1. Gender?
   a. Male
   b. Female

2. Age?
   a. Under 21
   b. 21-30
   c. 21-40
   d. 41-50
   e. 51-60
   f. 61-70
   g. 71-80
   h. 80+

3. Which of these best describes your current situation?
   a. Self-employed
   b. Employed full-time
   c. Employed part-time
   d. Looking after the home or family
   e. Permanently retired from work
   f. Unemployed and seeking work
   g. At school
   h. In further/higher education
   i. Government work or training scheme
   j. Unable to work due to being permanently sick or disabled
   k. Unable to work due to short-term illness or injury
   l. Retired but working part-time and/or irregularly
   m. Other (please specify)

4. If you are in employment, please tell us what your occupation is?
5. In what role are you interested in dementia and music (if more than one applies please select the role that is most relevant)?
   a. As a musician
   b. As an academic
   c. As a person with dementia
   d. As a carer for somebody with dementia
   e. Other (please specify)

6. What country do you stay in?
   a. Scotland
   b. England
   c. Northern Ireland
   d. Wales
   e. Other European Country
   f. Other (please specify)

**Experience of Dementia and Music**

7. Are you, or have you ever, been involved in or been part of any intervention/project/event relating to music and dementia? If yes, please tell us a little about the project/interventions relation to music and dementia that you have experienced? Please also tell us about your role in the project e.g. participant, observer, organiser etc.

8. Other than any events/projects/interventions you have noted in question 7, are you aware of any other forms of music events/projects/interventions for people with dementia? If so, please provide details.
9. Do you think that music is beneficial to people with dementia?
   a. Yes, very much so
   b. Yes a little
   c. No, not at all

10. Please tell us what benefits you think music has for people with dementia

11. How do you think people with dementia experience the benefits? What, in your opinion, are the mechanisms behind the benefits of music for people with dementia?

12. What form should music projects/events/interventions take to be of optimum benefit to people with dementia? Please provide reasons for your answer

13. What challenges do you see in the provision of music events/projects/interventions for people with dementia?

14. Do you think that music should be considered as a treatment for people with dementia? If so, what form should this take? Will some interventions be a more successful treatment than others? Please provide reasons for your answers
Evaluation and Future Research

15. In terms of your experience, and knowledge, what do we still need to find out about dementia and music? Are there current gaps in our understanding about dementia and music? If so what are these gaps?

16. How should the beneficial effects of music be measured or evaluated? What are the important aspects to capture when measuring the benefits?

17. Please tell us of any key texts/pieces of literature or research that we should be aware of that should inform future research into music and dementia?

18. Please provide any additional comments that you feel are important about music and dementia

End of Survey
Thank you for completing the survey.

If you still had some time, we would invite you to draw a mind map/flow diagram, which represents your understanding of the relationship between music and dementia. These can be forwarded to the project team, who are also happy to answer any further questions you might have about our research.

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Appendix 2: Mindmap