

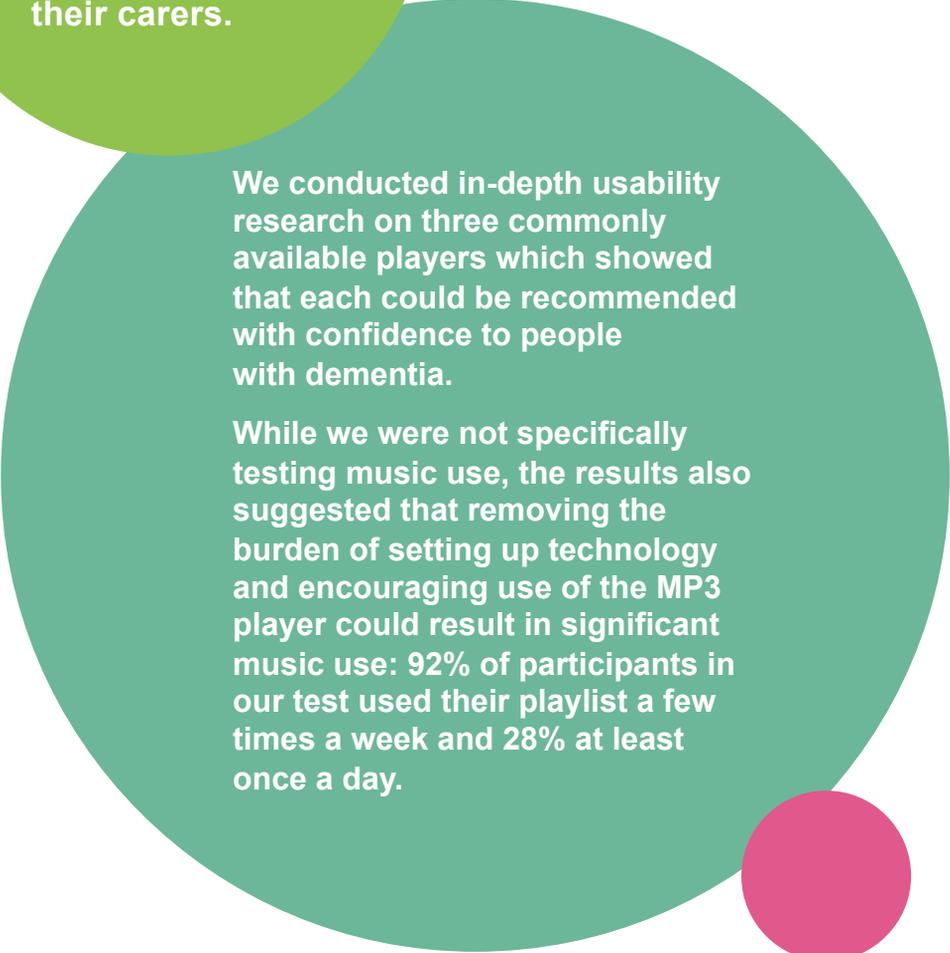
Testing portable music players for dementia

A report by Playlist for Life
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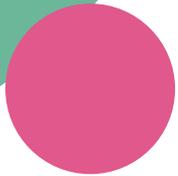


Playlist for Life is often asked to recommend a personal music player by people with dementia or their carers.



We conducted in-depth usability research on three commonly available players which showed that each could be recommended with confidence to people with dementia.

While we were not specifically testing music use, the results also suggested that removing the burden of setting up technology and encouraging use of the MP3 player could result in significant music use: 92% of participants in our test used their playlist a few times a week and 28% at least once a day.



1. Introduction

Everyone with dementia is different and our experience shows that no single music player suits every person's needs. Some people find that using a music streaming service on a smartphone or tablet works well while others prefer a larger table-top device with speakers.

But for a significant number there is a need for a simple and inexpensive portable player that people can take with them wherever they go without requiring an internet connection and without worrying about breaking or losing the device.

Playlist for Life worked with people with dementia and their carers to test a range of portable MP3 players to understand which, if any, we could recommend, what improvements might make them better, and what guidance people might require to enable them to use the devices effectively.

2. The devices

There are numerous MP3 players on the market. We bought thirty players from a range of manufacturers and conducted an initial sift ourselves based on recommendations and feedback we received from stakeholders. It was clear that most of the players were unsuitable. Many were very poor quality and most had significant usability issues. We chose three of the players to test:



Bush 4GB MP3 player

Argos • £14.99

www.argos.co.uk/product/3422575



Bush 8GB MP3 Player With Display

Argos • £29.99

www.argos.co.uk/product/2842448



Solo USB Personal Audio MP3 Player

Kings Access Technology • £49.95

www.kingsaccesstechnology.com/shop/solo-usb-personal-audio-player

3. The testers



We recruited 29 people with dementia to the project, 28 of whom were supported by carers who also took an active part in the project.

Participants were recruited by direct approaches to dementia groups we had previously worked with and an email to approximately 1,800 people on our mailing list. The recruitment was oversubscribed and we had to limit the number who could take part.

The main criteria for acceptance were that participants had to have a diagnosis of dementia, that they or their carer would be able to meaningfully participate in the project, i.e. understand instructions and respond to questions, and that each person with dementia or their carer would be able to suggest five songs that were personally-meaningful to the person with dementia. For the sake of convenience and budget we also sorted the responses by geographical area as our method required some participants to take part in one-to-one sessions with Playlist for Life staff in their own home or in the place their dementia support group regularly met. Beyond these criteria, participants were recruited on a first come, first served basis.

All participants lived at home. They were all in their sixties or older and the oldest participant was in his nineties. Their dementia ranged from newly diagnosed and mild to fairly advanced. There were 17 men and 12 women with dementia. All but one of the people with dementia were supported by a family carer, generally a spouse or son/daughter, who also took an active part in the testing process.

4. Testing method

We assigned an MP3 player to each person with dementia. One of the participants with dementia was partially sighted so we assigned him the Kings Access player which is designed for people with visual impairments. The remaining participants were distributed players based upon our understanding of the severity of their dementia to ensure that each player was tested by people with a range of abilities and experiences.

Prior to testing, each person with dementia or their carer nominated five songs that were important to the person with dementia. We purchased the tracks and loaded them onto the MP3 player that had been assigned to the participant. The participants then took part in different activities:

- **10 participants took part in one-to-one sessions in their own home** along with their carer, if they had one, and two members of staff from Playlist for Life. The participant was given their player without any initial guidance on how to use it. The PFL staff gave the participant tasks and asked them to talk through what they were doing, why they were doing what they did, and what their opinions were. One PFL staff member watched and noted their actions and words. The participants were then given a simple guidance sheet with reminders of how to use the device, encouraged to use it as often as possible, and left to their own devices for up to three weeks.
- **10 participants took part in group sessions** (3 in one group, 7 in another) along with their carer and PFL staff members. In the first group the people with dementia met in a separate sub-group from their carers, in keeping with their standard format for the meetings. In the other group, all were present in the one room. The music players were handed out without initial guidance and group discussion was encouraged as participants were asked to use the device for the first time. As with the first test group, the participants were then asked to use the player in their own time for up to three weeks. We returned to one of the groups two weeks later to find out their experiences in using the player. We could not return to the other group as it was not due to meet again until after the end of the project phase.
- **9 participants were sent their player through the post** with a simple guidance sheet outlining how to use it. These participants were offered the opportunity to call the Playlist for Life office for advice if they were stuck.

The testing period ran between October and December 2019. After three weeks of using the players, each participant was sent an online questionnaire. To encourage completion of the survey there was a prize draw for a £50 gift voucher that anyone who completed the survey could choose to enter.

5. Results

5.1 One-to-one sessions

Key findings were:

Abilities vary

Some participants were able to use the player themselves with almost no support. Others were unable to understand what it was or use it without support from their carer. This variance appeared to reflect the stage of their dementia.

On/off

The on/off switch of both Bush players was problematic for most people. Six people could not use it even after being shown, either because they couldn't understand the need for it, couldn't find it on the device, or found it too small, sticky or fiddly to use. Two others managed to use it with some difficulty. Two found it easily and were able to use it repeatedly. The main problem for most people was the size and colour of the control: it was too small, not differentiated in colour from the rest of the device, or too fiddly/stiff to use. We advised that the switch can in fact be left on permanently as the player goes to sleep after a short period and can be woken again by pressing the play button. However, people were confused or worried about this and some reported that they felt that if a device had an off switch it should be used and not left in the on position.

The device can be switched fully on or off by long-pressing the central button. None of the testers independently discovered this.

Buttons

Most people found the size of the buttons just right and most pressed the correct button when they were asked to start the music playing or stop it.

The screen

Those who had the player with a screen liked the idea of the screen, generally because they wanted to see the song titles or find specific songs easily.

But in reality:

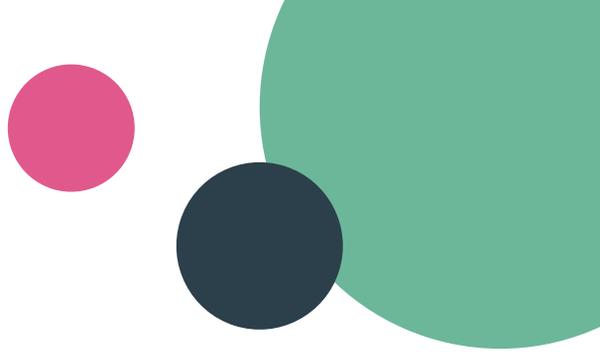
- Many people said that the way information was presented on screen was not clear
- the key presses required to navigate through screens and menus was confusing to a significant number of people
- Everyone was confused by the requirement to short press or long press the 'back' or 'Menu / Vol-' buttons to get back to various menus.
- Most people found it confusing that to move the item selection in menus up or down they had to press the left and right keys.

Size

Many people expressed surprise or delight at the device's size or amazement that it could hold so many songs. All thought the size was suitable, although some worried about losing it.

Music works

While we were not testing the efficacy of music, it was striking that 9 out of the 10 people with dementia in the one-to-one sessions reacted positively to music. All nine either sang along, said positive things, or showed clear expressions of happiness and enjoyment.



5.2 Group sessions

Group settings presented difficulties in demonstrating and facilitating use of the MP3 players for the first time. In both groups, participants had lots of questions and many needed hands-on support to use the player. In one group this led to rather chaotic discussion during which we were unable to answer all the queries. In one of the groups, there were some carers who did not see any value in using the players or doubted the skills of the people with dementia they cared for. At some points these opinions dominated and led that group into negativity about the possibility of benefits from the players.

When we revisited two weeks later we spoke to people with dementia and their carers separately. Negative opinions again dominated the discussion amongst carers but a more balanced outcome was clear from the feedback survey, suggesting that those who had a positive experience may not have been voicing their experiences in the group setting. The people with dementia who attended the follow-up session were more positive, although in some instances it seemed that this may have been due to desire to please the PFL staff member facilitating the discussion. But in exploring their experiences, most of the people with dementia reflected meaningfully on their experience and some made suggestions for practical and feasible improvements to the players.



5.3 Feedback survey

The feedback survey received 25 responses. Two were from people with dementia, the rest from carers. Key findings were:

How often

92% of people with dementia used the player at least a few times a week. 12.5% used it once a day and 12.5% several times a day.



of people used the player at least a few times a week

Ability

6% of people with dementia were able to use the player with no support. 47% needed a little support. 35% could not use the player themselves and had to rely on a carer. This seemed to broadly mirror the user's stage of dementia. Results were similar whether the device had a screen or not.

Size of buttons

79% of respondents thought the size of the buttons was 'just right'. The others thought they were 'too small'.



of people thought the size of the buttons was 'just right'

Expectations

71% agreed that the buttons did what they expected them to do.

Finding songs

There was an almost even split on whether the user could find a song they wanted to listen to. 52% reported Very Easy or Quite Easy. 48% reported Quite Difficult or Very Difficult. Those who had a player with a screen reported it as marginally easier. Both people with dementia who completed the survey reported the task as Quite Easy. One person added more songs to the device and commented that after that it was hard as there were more songs to skip through.

Use of screen

For those participants who had a device with a screen, there was an almost even split on whether the screen was useful (55% / 45%) and on whether the text was big enough (45% / 55%). But those who felt the text was too small felt that strongly.

Charging

Most people (62%) found charging the device quite difficult or very difficult.

Headphones

Most people (79%) found it Very Easy or Quite Easy to use the headphones.



found it Very Easy or Quite Easy to use the headphones

Recommendations

74% of people would recommend their player to someone else living with dementia. Reasons for not recommending it included:

- “Too frustrating when the person with dementia can’t work out what to do “
- “Wires get in a tangle. “
- “Too expensive”
- “Too difficult to use.”
- “Size of buttons”

Adding songs

There was confusion/frustration about the process of adding more songs to the device. We were not specifically testing that but some participants decided to try to do it themselves and found it confusing, frustrating, difficult, or impossible.

Improvements

Participants suggested several ideas for improving their player. Ideas included:

- Make the on/off switch bigger
- Add big simple words to the buttons instead of symbols (e.g. “Play/Pause”)
- Add an alert when the battery is approaching empty
- Make it more colourful, i.e. brighter buttons
- Provide a lanyard or clip with it so it doesn’t get mislaid
- Add braille to the buttons
- Make it wireless (this applies only to the Bush devices, the Kings Access is already Bluetooth enabled so can be used with wireless headphones and speakers)

Devices with a screen:

- make the on-screen text bigger and give it a higher contrast
- make navigation easier
- tell users what they have to do at each stage with on-screen instructions

Qualitative feedback

The feedback survey had a number of qualitative questions. These are a selection of responses on the benefits of the player:

- “Using the MP3 completely uplifts [her]. I use it to get her to walk around the house when she’s struggling with her mobility. The music just gets her going.”
- “My husband was really happy to get it. And it was lovely to see him listening to his music. Thank you!”
- “The music brought great joy and instant distraction when [she] was feeling down and worried.”
- “The player literally brought music back into [her] life. She had not listened to music except on TV.”
- “Very calming for [him]. He enjoyed it!”
- “I found the music player a really useful tool. [My husband] has no concept of time and I could put on the music and say things like ‘we’ll be leaving after a couple of songs.’ It definitely helped his mood and he enjoyed his music choice immensely transporting him back to easier times. We will certainly continue to use and load on more songs.”



6. Conclusions and next steps

Suitability of the players

All three players we tested would be suitable for many people living with dementia. Most people managed to use their player regularly and got benefit from it even when they said it was not perfect. Playlist for Life can recommend each of the three players with confidence.

Guidance required on which player to choose

It was clear that careful guidance on which player to choose and how to use each player will be necessary to ensure a positive experience and beneficial use. Which player to choose is partly a personal choice based on what is important to the user and their carer, partly dependent on the stage of someone's dementia and their abilities. Guidance should set out the advantages, benefits, complexities and barriers of each player and encourage people to make their own choice.

Carer support essential

Most people with dementia will need some support from a carer to make full use of the device. Playlist for Life will ensure that our advice makes carers are aware of that and helps them develop the skills needed to make full use of the player.

Adding songs

More testing will be needed on the process of adding songs to the player. Many testers asked how to do this. While we were not testing that specifically in this project, some people tried it and found it very difficult. Others deduced that they would not be able to do it as they only owned a tablet or smartphone. Specific research to understand people's contexts and the difficulties they face will allow us to offer clear guidance and / or promote targeted support services through Playlist for Life's community Help Points.

Introducing players

With accessible and clear written guidance players can be introduced without one to one support as long as a carer is able to facilitate the use of the player. However, there was certainly benefit in introducing the players in a one-to-one setting as those people were more likely to recommend their player to others and had fewer misapprehensions about how it worked. This was probably due to the fact that the person introducing the player in a one-to-one session can answer questions and proactively correct incorrect use that they observe. But, in our cohort at least, those who received their player remotely with no support were just as likely to use it regularly.

Group sessions will require careful facilitation

Introducing players in a group setting proved problematic. In this setting careful thought will need to be given to the structure of the event and how it is facilitated. The difficulties experienced at the group settings may have been down to the lack of experience of the Playlist for Life staff in running such sessions. Perhaps more thought should be given to training familiar facilitators and asking them to introduce devices. However, despite these reservations, again it was clear that when it came to using the device many participants were still able to use their player regularly.

Removing tech barriers may lead to uptake of music

One of the most striking results was that 92% of participants used their player at least a few times a week. We already know that setting up a music player is a major barrier to use. While some of the use may have been because we encouraged it, this does suggest that taking away that barrier can result in a huge uptick in the use of playlists. This would be a fruitful area for further research.

7. Suggestions to manufacturers

There are clear improvements that could be made to the players which would make them even more suitable for people with dementia and their carers. There was not enough data to make specific recommendations on the Kings Access Player but we would suggest the following improvements for the Bush players:

Both players

Improve size and colour contrast of the on/off switch. Or, alternatively, remove it entirely and use the main play/pause button as the power button.

Make buttons stand out more by making them more colourful against the black material of the body of the player

Add words to the buttons instead of just symbols or provide colourful dementia-friendly labels that can be stuck on to buttons.

Bush player with display

Reformat the buttons so they more intuitively reflect the movement of the selection on screen.

Provide an 'accessibility option' or 'simple screen option' to simplify the user experience by:

- Increasing the readability of text by making it larger and/or improving colour contrast.
- Simplifying the screen displayed when a song is playing to remove the graphic equaliser, kbps indicator, song length indicator etc. The only essential information is the name of the song, the name of the artist, and the album image if available.
- Simplifying navigation and making the buttons used to navigate more intuitive.
- Adding clear on-screen instructions at key points (e.g. on song list screen "to play this song press the play button")
- Removing access to 'unnecessary' functions (e.g. photos and videos)



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