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The MARCS Institute for Brain,  
Behaviour and Development



# MUSIC PLAYLISTS FOR PEOPLE WITH DEMENTIA:

A Guide for Carers,  
Health Workers and Family

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# THE RELATIONSHIP BETWEEN MUSIC AND DEMENTIA: AN OVERVIEW

**‘Dementia’ is an umbrella term that covers a number of degenerative neurological disorders that typically effect memory, language and reasoning abilities. In 2017, it was reported by Alzheimer’s Australia that there were more than 413,106 Australian’s living with dementia, a figure that is likely to grow to over one million people by the year 2056 (Alzheimer’s Australia, 2017). This growth is already placing increasing demand on the aged care industry.**

Alongside cognitive challenges, people living with dementia also experience personality, mood and behavioural difficulties such as depression and agitation. However, antidepressants, anxiolytics and antipsychotics often used to treat depression and agitation in dementia are not always effective in reducing symptoms and can be associated with severe side effects (Sacchetti, Turrina, & Valsecchi, 2010). Thus there is a great need for carers of people with dementia to have access to non-drug interventions that can increase the quality of life of the individual and the caregiver.

Music is one of the most widely used non-drug interventions for people with dementia. Research has demonstrated that music can be a highly effective way to manage the symptoms of dementia when facilitated by a trained music therapist (Raglio et al., 2015). More recently, research has shifted to give greater emphasis to musical interventions that are not therapist led such as individual music listening with headphones.

While sessions with a trained music therapist, or active forms of musical engagement such as singing offer additional therapeutic benefits to merely listening to music, the advantage of using pre-recorded music is that it can be used as frequently as needed in a variety of settings, and is relatively low cost. Research shows that listening to pre-recorded music can improve a range of psychological symptoms including agitation, anxiety and depression. However, music does not have a universally positive effect, and needs to be selected carefully to obtain the greatest therapeutic benefits (Garrido et al., 2017).

The aim of this guide is to help caregivers who are not trained music therapists to understand how to use pre-recorded music in targeted ways to address various challenges to care, and how to identify and manage music use for individuals who are prone to negative responses.

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*There is evidence that using pre-recorded music can help improve agitation, anxiety and depression in people with dementia.*

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## HOW TO USE THESE GUIDELINES

These guidelines are designed to be used by both home-based carers and care staff in residential aged care homes. However, the Guidelines are general in nature and do not constitute personal medical advice. These Guidelines are not an alternative for medical treatment and care provided by qualified medical professionals.

The next section contains a brief step-by-step outline of the approach we recommend. However, we also suggest that you read the more detailed information relating to each step so that you understand the processes involved, and use the tools contained at the end of these guidelines to help you monitor and plan how you will use music for each individual in your care.

There are several things that need to be taken into account when selecting music for people with dementia. These include:

1. The key challenges to care that the caregiver wants to address
2. The person's tastes and preferences
3. The person's mental health history and current symptoms
4. Features of the music itself
5. The time of day and frequency with which the music will be played

# QUICK REFERENCE GUIDE TO MUSIC SELECTION FOR PEOPLE WITH DEMENTIA

Follow the steps in the purple boxes to develop your music plan for each individual, referring to the additional resources in the pink boxes for more information.

<b>STEP 1</b> Vulnerability Assessment	<b>QUESTIONS TO BE ADDRESSED</b>	Is the individual vulnerable to negative responses?
	<b>GUIDELINES SECTION</b>	Chapter 1 (p. 6)
	<b>DECISION MAKING TOOL</b>	Appendix 1 (p. 15)
<b>STEP 2</b> Identify Key Challenges to Care	<b>QUESTIONS TO BE ADDRESSED</b>	How many playlists are required? Which challenges to care should they address?
	<b>GUIDELINES SECTION</b>	Chapter 2 (p. 8)
	<b>DECISION MAKING TOOL</b>	Appendix 2 (p. 17)
<b>STEP 3</b> Identify Personal Tastes and Preferences	<b>QUESTIONS TO BE ADDRESSED</b>	What kind of music does the individual most like? What are their favorite songs and artists? If specific information is hard to find, what music is likely to be appealing to this individual based on their cultural, religious background or age group?
	<b>GUIDELINES SECTION</b>	Chapter 3 (p. 9)
	<b>DECISION MAKING TOOL</b>	Appendix 3 (p. 18)
<b>STEP 4</b> Selecting Music	<b>QUESTIONS TO BE ADDRESSED</b>	What are the individual's personal preferences? Is extra care needed due to a high level of vulnerability? What music selection criteria apply to the challenges of care I want to address?
	<b>GUIDELINES SECTION</b>	Chapter 4 (p. 10)
	<b>DECISION MAKING TOOL</b>	Appendix 4 (p. 22)
<b>STEP 5</b> Upload playlists to portable playing devices	<b>QUESTIONS TO BE ADDRESSED</b>	What time(s) of day or in which situations should the playlists be used? Do I have a plan for monitoring responses in place? Do all caregivers know about the plan? Do the playlists need to be changed based on observed responses?
	<b>GUIDELINES SECTION</b>	Chapter 5 (p. 13)
	<b>DECISION MAKING TOOL</b>	Appendices 5 and 6 (pp. 29 – 31)
<b>STEP 6</b> Integration of Music into Care Plan		

# CHAPTER 1 VULNERABILITY TO NEGATIVE RESPONSES

While music has been identified as a valuable tool for improving mood and reducing behavioural disturbances, it is important to recognise that not everyone will respond positively to music. In some instances, people may even become distressed or upset during music listening. Emotions such as sadness can provide useful opportunities for people to release or process negative emotions (Garrido, 2017). However, research has shown that people with a history of depression may find it more difficult to recover from negative emotions, and such people may thus be vulnerable to undesirable after-effects from listening to music (Garrido, Bangert, & Schubert, 2016). In addition, some studies have found that some people with dementia may experience increased agitation as a result of listening to music (Nair et al., 2011; Park & Specht, 2009).

Negative reactions are substantially more common within groups that have been identified as being vulnerable. A person's personal history, deficits in cognitive functioning or struggles with mental health can increase susceptibility to undesirable reactions. People with a history of or currently diagnosed depression are more prone to experiencing negative mood shifts when listening to music (Garrido & Schubert, 2015). Similarly, people with a higher degree of cognitive impairment are more prone to experiencing negative reactions.

People with a history of trauma or abuse are also particularly susceptible to the triggering of distressing memories if music is not carefully selected.

It is important that individual reactions are taken into consideration and appropriate measures taken to minimise or manage undesirable reactions within vulnerable populations. This section will discuss identification of such individuals, see Chapter 5 p. 13 for specific information regarding the monitoring and management of adverse responses.

## MENTAL HEALTH HISTORY & CURRENT SYMPTOMS

In order to determine the person's vulnerability to negative responses to music, it is important to find out something about their mental health history and/or their current symptoms either from the person themselves or from family and friends.

The following screening tools are recommended:

1. The Mini Mental Status Exam (MMSE) or any other tool commonly used for assessing cognitive ability
2. The Vulnerability to Negative Affect in Dementia Scale (VNADS) (Appendix 1)

**The Mini Mental Status Exam (MMSE)** is often used in aged care contexts and can be a useful tool for assessing abilities such as memory and thinking skills. The MMSE takes approximately 5 to 10 minutes to administer. The MMSE does not require any specialised equipment and can be accessed online for free at [www.ihpa.gov.au/sites/default/files/publications/smmse-tool-v2.pdf](http://www.ihpa.gov.au/sites/default/files/publications/smmse-tool-v2.pdf)

The highest attainable score is 30, with scores between:

- 25 and 30 suggesting no significant cognitive impairment
- 20 and 25 indicating a mild impairment
- 10 and 20 suggesting a moderate impairment
- 10 and below indicating severe impairment.

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*People with a history or current symptoms of depression can be more vulnerable to undesirable outcomes from listening to music.*

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The severity of an person's cognitive impairment will inform the extent to which a person may have the capacity to have input into the creation of their playlist, the musical qualities that would be most beneficial to prioritise on the playlist, and the level of monitoring the person will require during music listening. Low risk individuals are more likely to enjoy a broad range of music, whereas high risk individuals may respond to a narrower range of songs.

Additionally, it is also important to evaluate a person's psychological wellbeing before proceeding to create a musical playlist for them. This should involve briefly screening for indications that a person may be experiencing symptoms or have a history of depression, anxiety, agitation or any other disturbances to psychological wellbeing. This can be achieved by having a short conversation with the person if they able to. Observations from caregivers and family members can also be used.

Appendix 1 contains a screening tool called the *Vulnerability to Negative Affect in Dementia Scale (VNADS)* that can be used to identify people at risk of negative responses to music. If the person scores a maximum of 1 item above neutral this would indicate they are 'low risk'; if they score 2 items above neutral they should be considered 'moderate risk', while if they score 3 or more items above neutral they should be considered 'high risk' (see Table 1).

The screening tool can be used in one of two forms: one for use with the person with dementia themselves, and one for use by family and friends on behalf of the person with dementia.

TABLE 1 – RISK CATEGORIES BASED ON SCORES ON SCREENING TOOLS

CATEGORY	MMSE SCORE RANGE	VNADS SCORE RANGE
Low risk	> 20	1 item selected above neutral
Moderate risk	20 -10	2 items selected above neutral
High risk	< 10	≥ 3 items selected above neutral

*Screening tools can be used to determine whether persons with dementia are at risk for negative responses to music.*





# CHAPTER 2 IDENTIFYING THE KEY CHALLENGES TO CARE

**Music can be used for more than just entertainment for people with dementia as it can provide a useful first line treatment for some of the key challenges to care.**

There are four main ways that music can provide therapeutic benefits to people with dementia:

- By reducing or increasing arousal or alertness levels.
- By distracting individuals during challenging activities or times of the day.
- By helping them reconnect with personal memories.
- By providing mental stimulation.

Some of the key challenges to care that music can help to manage include:

- Agitation or anxiety
- Withdrawal or apathy
- Reduced verbal or social engagement
- Resistance to care situations such as showering, dressing or eating
- Restlessness, wandering, or falls
- Sleep disturbances

Appendix 2 can be used as a template for determining the key challenges to care for each individual. It is recommended that separate playlists be created to address these different challenges.

If someone is apathetic or sad and withdrawn this is a relatively low arousal and negative state. In this case, music should be of moderate tempo in order to increase arousal levels, while taking care not to make the music too fast since this can be overstimulating and uncomfortable.

It may be useful to have several playlists for a particular person, depending on the key challenges to care that you have identified for them. For example, a person may be withdrawn and apathetic at times, but agitated and anxious at other times. Different playlists would thus be used depending on the symptoms of the person for which the music is being used. Music can also be used to reduce restlessness and wandering by providing them with an interesting distraction and reducing arousal levels at a time when they might usually start to feel anxious. Falls can sometimes be reduced when the individual is distracted from wandering at key times of the day when they may usually become restless. Similarly, if the individual tends to become agitated during particular care routines such as showering or dressing, music can provide a useful distraction at this time. In such situations the tempo is not so important, as long as the music is enjoyable to the individual.

Similarly, where individuals are becoming less verbal and engaging in social interaction less frequently, music can help to reconnect the individual with personal memories that stimulate increased sharing with the caregiver (see Appendix 2). More details about how musical features such as tempo and mode interact with particular symptoms are covered in chapter 4 as well as in Appendix 2.

# CHAPTER 3

## PERSONAL TASTE AND PREFERENCES

**Research has demonstrated that music playlists are most effective when the selected music is personally significant to the individual. Studies comparing the use of personalised music with music not specifically based on the preferences of the person consistently indicate that personalised music has better outcomes on mood and behaviour. For example, studies have demonstrated that music not specifically derived from an individual's personal preferences can actually increase their agitation (Nair et al., 2011).**

Furthermore, one study found that playing classical music to persons with dementia caused increased agitation, whilst using personalised playlists led to the same person becoming calmer (Ragneskog, Asplund, Kihlgren, & Norberg, 2001). Personalisation of playlists is likely more effective because the music is associated with and can activate memories that may otherwise be lost to the person with dementia. The person can be taken back to a time they were able to interpret and understand, overriding aspects of the present environment that may currently be interpreted as confusing or meaningless.

There are several ways that the preferences of each person can be determined:

- By asking the person themselves
- By asking family, friends and carers
- By playing music to the person and observing their reactions, including at different times of day

When possible, the person for whom the playlist is being created should be the first point of call when gathering information about musical preferences. Initially, it is recommended to ask the person what their favourite songs are or who their favourite musicians are.

Other questions such as asking whether there is a specific genre or era of music they may prefer are also useful at this time. An adapted version of a questionnaire developed by Gerdner and colleagues (Gerdner, Hartsock, & Buckwalter, 2000) can be found in Appendix 3. Notice that these questions focus on finding out not just types of music but specific songs that are personally meaningful to the individual.

Family and friends may be able to supplement this information, and in many cases may be the primary source of information where the person with dementia is no longer able to communicate verbally or is unable to remember specific songs or artists. Appendix 3 also contains a questionnaire for family and friends. Family members can be asked whether they have access to any CDs, cassette tapes or records that the person owns, as these could be incorporated into the playlist.

This is also an opportunity to ask the family member whether they are aware of any music that the person has reacted negatively to in the past, or perhaps any music that would be associated with any negative or emotionally intense memories for that person.

Where it is difficult to get information either from the person themselves or from family and friends, it is possible to simply play music to the person and observe their reaction. It is recommended that music covering a wide range of genres and time periods be prepared on a portable listening device. This can then be used to play examples of different genres of music to the person.

A good place to start can be music from the 'reminiscence bump'. The reminiscence bump refers to the increased recollection and preference for events that occurred during an individual's adolescence and early adulthood. Most people will show a preference for music that was popular when they were 15 years old to 30 years old. Appendix 4 contains a list of songs from the 40's through 70's that covers a wide range of genres. People not from an English-speaking background may particularly benefit from the use of music specific from the region in which they grew up.

If the person being interviewed is limited in their ability to speak or communicate verbally, a positive reaction can also be gauged through body language, such as tapping foot/hand in time with the music, head nodding, singing, humming, smiling etc. Negative reactions may be evident from crying, distressed vocalisations or facial expressions, restlessness or shallow breathing, for example. Responses to songs can be rated using a scale developed by Samson and colleagues (Appendix 5) which categorises the strength of the memories evoked by the music based on various types of reactions (Samson, Dellacherie, & Platel, 2009). A number of songs can be played to the person and songs selected based on the strength of the rating given.

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*Music that is personally significant to an individual or from a preferred genre will be more effective for managing moods and behaviour in people with dementia.*

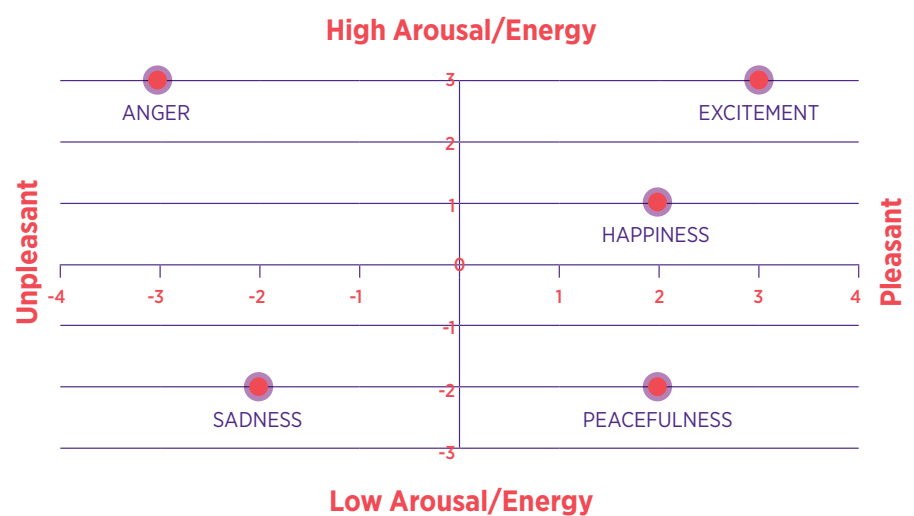
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# CHAPTER 4 SELECTING MUSIC FOR PLAYLISTS

One of the primary ways in which music influences our mood is by its effect on arousal levels, or how sleepy or alert a person feels. Emotions and moods are often categorised according to two dimensions: (i) arousal (activation or energy), and (ii) pleasantness. Figure 1 shows how several common emotions are understood on the basis of this model. For example, happiness is generally a relatively high-energy, pleasant emotion. Excitement is also a pleasant emotion but is higher in energy or arousal, while peacefulness is similarly pleasant but is low energy. Negative emotions can be high or low energy as well, with sadness being a low energy emotion and anger being a high energy emotion.

FIGURE 1 – TWO-DIMENSIONAL MODEL OF MOODS AND EMOTIONS



In general, most people function best when they are at a moderate level of arousal – neither under-stimulated or over-stimulated – and are experiencing positive emotions. Therefore, it is helpful to think about the symptoms that the person with dementia is experiencing and where they sit in this model so that you can determine in which direction you would like to change their current state.

## HOW MUSICAL FEATURES INTERACT WITH PARTICULAR SYMPTOMS

Musical features can also have an impact on a person's experience when listening to music. The tempo (speed) and mode (key) of a piece of music can have an impact on the emotional response of the individual and are detailed in this chapter. It is important to note here also that the use of music that falls outside of these guidelines for most people, can still have positive mood effects; especially if the music has personal significance. However, care should be taken particularly with people who have been identified as vulnerable.

**Tempo** refers to the speed or the pace of a piece of music and is typically measured by the number of beats per minute (BPM). Research has demonstrated that when music is played to older adults at a slow to moderate tempo (e.g. Louis Armstrong's *What A Wonderful World*), it will result in greater interest than music that is of a fast tempo (e.g. Connie Francis singing *Everybody's Somebody's Fool*) (Garrido, Stevens, Chang, Dunne, & Perz, 2019). In fact, it has been found that when music with a fast tempo is played, it can increase arousal in a way

that is unpleasant and perhaps overwhelming, particularly for people with high levels of arousal, such as those who are already agitated. Therefore, it is preferable to pick something with a slow to moderate tempo to ensure the listener remains engaged without becoming overwhelmed.

Alternatively, music therapists also sometimes use a technique called the ISO principle, in which music which matches the individual's arousal levels is used first and then music of decreasing tempos can be selected to slowly reduce arousal.

While it is possible to simply estimate whether or not a piece of music is slow, fast or moderate in speed without determining the exact BPM, in rough terms, a tempo can be regarded as slow if it is less than about 80 BPM, fast if it is greater than about 120 BPM, and moderate if it falls in between. If unsure, there are several ways that you can determine the BPM of a piece of music:

- Count the beats in the music per minute as you would when taking a pulse.

- Clap along with the music for one minute and count how many claps you do during this time.
- Use an online metronome – [8notes.com/metronome](https://8notes.com/metronome)
- Search online for the usual tempo the piece is performed at by typing the name of the song plus tempo into a search engine.

**Mode** refers to the *key* in which a piece of music has been written. In most music in Western cultures the mode is usually *minor* (typically associated with 'sadness' or negative emotions) or *major* (typically associated with happy, positive emotions), this is independent of tempo. That is, a slow piece of music is not necessarily in a minor key, nor is faster music always in a major key. Music in a minor key tends to increase experiences of negative emotions in people with dementia (Garrido et al., 2019). Similarly to tempo, while it may not be necessary to avoid music in minor keys altogether, it may be advisable to avoid for people who have been identified as having a vulnerability to negative responses.





Determining the mode of a piece of music is not always easy even for the musically trained. However, there are some simple methods that can be used:

- Search online for the “key” the music is usually played in or,
- Search online for the “sheet music” or “score” by simply entering the name of the song plus the word “key” into the search engine.

A small letter “m” is used to indicate a minor key. Thus, when a capital letter is found at the very beginning or very end of the music with the letter “m” this usually signifies that the music is in a minor key or mode. Cases where the letter “m” is absent indicates the song is in a major key. Figure 2 shows the song “Sometimes I Feel Like A Motherless Child”. In this example, a capital “F” with a small letter “m” is seen at both the beginning and end of the song, signifying that the piece is in a minor key.

**FIGURE 2 – SHEET MUSIC FOR “SOMETIMES I FELT LIKE A MOTHERLESS CHILD”**

**Sometimes I Feel Like A Motherless Child**  
African-American Spiritual

Some-times I feel like a mo-ther-less child, Some-times I feel like a

mo-ther-less child, Some-times I feel like a mo-ther-less child, A

long way\_ from home, A long way\_ from

home. Some-times I fell like I'm al - most gone,

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*Music in slow to moderate tempos and in major keys tends to have more positive effects on the mood of people with dementia.*

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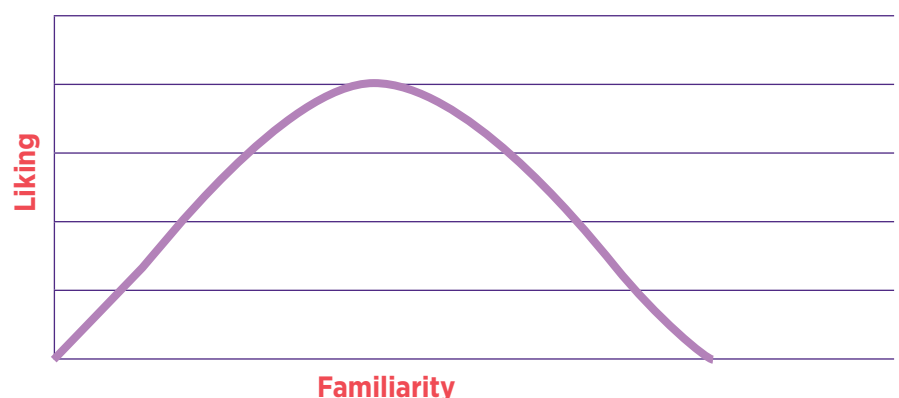
## TIME OF DAY, DOSAGE AND LISTENING ENVIRONMENT

People may have different arousal needs at different times of the day. For example, in the mornings, some people may need music that can increase their arousal if they tend to be sleepy or withdrawn. Many persons with dementia may also experience restlessness, fearfulness or agitation in the late afternoon or early evening, which can have a number of contributing factors. It can be helpful to introduce music listening prior to the typical onset time of these symptoms.

More specifically, if someone were to usually become agitated at 4pm, music listening could occur from 3:30pm with the intention of offsetting the agitation. In this case it may be that music designed to lower arousal levels will be most useful. For other people, mealtimes can be the time when music is particularly useful for reducing unsettled behaviour. If a person typically has trouble sleeping, a playlist designed to lower arousal to a sleep-inducing level could be very useful.

It is also important to consider how often the person will benefit from listening to music and for how long. Research indicates that enjoyment of music tends to follow an inverted U-shape as depicted in Figure 3 – enjoyment increases according to how familiar it is to the listener. However, when the music becomes over-familiar, liking for the music decreases. How often each person will be able to listen to particular music without becoming bored with it will depend on several variables including their current memory functioning. People with significantly impaired short-term memory are less likely to become over-familiar with a particular song even with regular listening. It can be beneficial therefore to monitor and record responses in a music-listening diary for a period of 1-2 weeks (Appendices 5 and 6) in order to determine what that particular person's saturation point is for certain music.

**FIGURE 3 – INVERTED U-SHAPE RELATIONSHIP BETWEEN FAMILIARITY AND LIKING OF MUSIC**



Older adults in general and people with dementia in particular, can be sensitive to noisy environments. The listening situation can be an important factor in whether or not the music listening experience will be a positive one for the individual. Some individuals may find that listening to music with headphones helps to block out noises from the environment that may be disturbing. For others, it may be more useful to listen to music in a quiet place such as their own room.

A diary template is included in Appendix 6. Ideally for those with low saturation points who tend to become bored with listening to the same music rather quickly, it may be best to have several playlists of approximately 30-45 minutes each for each situation in which the music might be used.

For example, 2-3 playlists could be created for mornings, another 2-3 for use during periods of agitation, and another 2-3 for use before sleeping. These can then be rotated as needed so that over-familiarity with the music is less likely to occur.

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*Different playlists may be needed to manage different symptoms at different times of the day. Individuals should be monitored to determine the most useful 'dosage'.*

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# CHAPTER 5

## MONITORING AND MANAGING ADVERSE REACTIONS

### HOW TO MANAGE NEGATIVE RESPONSES TO MUSIC

1. Identify high-risk individuals
2. Have monitoring, support, and strategies for counteracting a negative response in place before the music listening begins
3. If a negative reaction occurs stop playing the music
4. Keep a record of the music that was being played, the time of day, listening situation and the response of the person
5. Try some different music or apply strategies that have previously been found to distract or cheer up the person to counteract the immediate response
6. Working from the records that have been taken, modify the playlists, listening situation or time of day the music is played based on observations

As previously noted, people who have a higher degree of cognitive impairment and/or are experiencing or have a history of psychological difficulties or trauma, are more likely to experience a negative response to music than individuals who do not fall into these categories. However, these groups of people are still able to experience the benefits of music if appropriate strategies are put into place.

Firstly, extra care should be taken during the music selection phase, to ensure that playlists do not contain music likely to trigger distressing memories and that the music selected does not have musical features such as minor modes that may be more likely to create a negative response. Additionally, it is also important that this group is closely monitored during music listening. This will allow space for adverse reactions to be quickly identified and appropriate support offered, and for playlists to be adjusted so that more helpful music is used in future. Where possible a trained psychologist, geriatric psychiatrist, pastoral care worker, or a nurse or caregiver familiar to the person with dementia should be on hand to offer support in the case of an adverse reaction. Alternatively, caregivers may keep on hand something that has been known to soothe the person with dementia in the past such as a favourite object or activity.

Keeping a diary of songs heard and how the person responded to them such as that provided in Appendix 6 can be a useful strategy. Recording responses can help with identifying pieces of music that seem to trigger negative responses as well as music that seems to generally have the desired positive mood effects.

This may be useful regardless of whether the individual has a negative response, since evidence suggests that the number of songs that will have a positive effect on the individual may narrow as cognitive functioning declines. In the early to mid-stages of dementia the individual may respond to a wide variety of music, yet as the condition progresses, they may begin to respond to only one or two key songs.

Even when precautions are taken, instances will still arise in which people experience negative reactions when listening to music. This can occur for various reasons, such as

the music being attached to a meaningful memory or perhaps triggering negative memories. For example, it is not uncommon for women to sometimes become upset when listening to songs featuring intimate sounding male voices, particularly the 'crooners' (e.g. Bing Crosby or Dean Martin), especially where the person may have a history of traumatic or abusive relationships, or may have had a spouse who has passed away. Alternatively, a person may have been in a distressed state prior to listening to music which may be exacerbated while listening to music.

When a negative response does occur, there are several things that can be adapted to create a more positive music listening experiences:

1. **Time of day.** As previously noted, there may be certain times of day during which people are typically more agitated, anxious or distressed. If a pattern is identified, it may be useful to use music prior to these periods to avoid the person reaching a state of agitation, anxiety or distress.
2. **Music Selection.** The selected music may be triggering negative or traumatic memories. Or the person may just not like the music that has been selected. It is recommended that music listening is attempted again at another time with different songs included on the playlist.
3. **The Listening Situation.** Some people may become distressed when wearing headphones for music listening. This can be the result of the headphones either being uncomfortable or perhaps causing the person to become confused and subsequently distressed about why they are wearing them. To address this, music can alternatively be played through loudspeakers in a private room. Other situational factors may be the place in which the person is seated while listening or the volume at which the music is being played.

While the benefits of music listening are experienced by many, if a person continues to have a negative response with these measures in place, then it is possible that music may not be the right thing for that person. Regardless, it is always important to have a support system in place for the person, such as ensuring that a familiar person is nearby.

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## APPENDIX 1

# VULNERABILITY TO NEGATIVE AFFECT IN DEMENTIA SCALE (VNADS): QUESTIONS AND SCORING METHOD

## VERSION FOR THE PERSON WITH DEMENTIA

Please tick the box in each row which shows the degree to which the individual agrees with these statements.

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE (NEUTRAL)	AGREE	STRONGLY AGREE
In the last 2 weeks I have had little interest or pleasure in doing things					
In the last 2 weeks I have felt down, depressed or hopeless					
Often throughout my life I have felt down, depressed or hopeless					
In the past 2 weeks I have felt so restless it is hard to sit still					
I have often had periods in my life where I felt so restless it was hard to sit still					
Sometimes I feel so upset that I want to hit or kick something					
Sometimes I feel so stirred up inside I want to scream					
Listening to music can sometimes bring back distressing memories					
Sometimes I get so stirred up by music that my emotions feel overwhelming					

## FAMILY VERSION

Please tick the box in each row which shows the degree to which you think these statements apply to the individual.

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE (NEUTRAL)	AGREE	STRONGLY AGREE
In the last 2 weeks he/she has had little interest or pleasure in doing things					
In the last 2 weeks he/she has felt down, depressed or hopeless					
Often throughout his/her life he/she has felt down, depressed or hopeless					
In the past 2 weeks he/she has found it hard to sit still					
He/she has often had periods where he/she felt so restless it was hard to sit still					
Sometimes he/she feels so upset that he/she hits or kicks something					
Sometimes he/she feels so stirred up that he/she screams					
Sometimes listening to music can bring back distressing memories to him/her					
Sometimes he/she experiences overwhelming emotions in response to music					

## APPENDIX 2

# CHALLENGES TO CARE

Please identify any of the following challenges to care that are present within the person and score them from 0 – 3 (3 being the highest/most severe, 0 being not present).

CHALLENGE TO CARE	SCORE
Agitation or anxiety	
Withdrawal or apathy	
Reduced verbal or social engagement	
Resistance to care situations such as showering, dressing or eating	
Restlessness, wandering or falls	
Problems sleeping	

### Recommendations for Playlist Creation and Use for Specific Challenges to Care.

CHALLENGE TO CARE	PLAYLIST RECOMMENDATIONS*	RECOMMENDED PLAYLIST USE
Agitation or anxiety	Tempos below 80 BPM	Use prior to known times of agitation; or as symptoms first arise
Withdrawal or apathy	Tempos between 80 and 120 BPM	Use prior to activities which you would like to motivate the individual to engage in, or in the mornings
Reduced verbal or social engagement	Ensure music is personally relevant; tempos less than 120 BPM	Use prior to opportunities for social engagement
Resistance to care situations such as showering, dressing or eating	Tempos less than 120 BPM	Use prior or during situations that cause resistance or agitation
Restlessness, wandering or falls	Tempos less than 80 BPM	Use prior to known times of day the behaviours typically occur, or as behaviours first arise
Problems sleeping	Tempos less than 60 BPM	Use after getting into bed or if they wake during the night

\*Note – All music should be selected with personal tastes and preferences in mind as detailed in Chapter 3 p. 9. Music in major keys may be preferable for many individuals, particularly those identified as at high risk of negative responses (see Chapter 1 pp. 6-7).



## APPENDIX 3

# DETERMINING MUSIC PREFERENCES

### QUESTIONNAIRE FOR THE PERSON WITH DEMENTIA

(adapted from Gerdner, L. A., Hartsock, J., Buckwalter, K. C. 2000)

**How important has music been to you in your life?**

\_\_\_\_\_ 1. Very important

\_\_\_\_\_ 2. Moderately important

\_\_\_\_\_ 3. Slightly important

\_\_\_\_\_ 4. Not important

**Do/did you play a musical instrument? If yes, please specify (e.g. piano, guitar).**

**If yes, how long have you been playing this instrument?**

**Do/did you enjoy singing? If yes, please specify (e.g. around-the house, in choir etc.).**

**Do/did you enjoy dancing? If yes, please specify (e.g. attended dance lessons, socials).**

**The following is a list of different types of music. Please indicate your 3 most favourite types with 1 being the most favourite, 2 the next and 3 the third favourite.**

\_\_\_\_\_ 1. Country and western

\_\_\_\_\_ 2. Classical

\_\_\_\_\_ 3. Spiritual/Religious

\_\_\_\_\_ 4. Big Band/Swing

\_\_\_\_\_ 5. Folk

\_\_\_\_\_ 6. Blues

\_\_\_\_\_ 7. Jazz

\_\_\_\_\_ 8. Rock and Roll

\_\_\_\_\_ 9. Easy Listening

\_\_\_\_\_ 10. Other \_\_\_\_\_

**Do you prefer:**

\_\_\_\_\_ 1. Vocal

\_\_\_\_\_ 2. Instrumental

\_\_\_\_\_ 3. Both

**Please identify as many songs as you can think of that make you feel happy.**

**Please identify any specific songs that you can think of which you find sad or distressing to listen to.**

**Please identify specific artists or performers that you enjoy listening to the most.**

**Name some albums that you have in your personal music library.**

## **FAMILY QUESTIONNAIRE**

(adapted from Gerdner, L. A., Hartsock, J., Buckwalter, K. C. 2000)

**Please complete this questionnaire based on your knowledge of your family member's music preferences.**

**How important has music been in his/her life?**

\_\_\_\_\_ 1. Very important

\_\_\_\_\_ 2. Moderately important

\_\_\_\_\_ 3. Slightly important

\_\_\_\_\_ 4. Not important

**Does/did he/she play a musical instrument? If yes, please specify (e.g. piano, guitar).**

**If yes, for how long have they been playing this instrument?**

**Does/did he/she enjoy singing? If yes, please specify (e.g. around-the house, in choir etc.).**

**Does/did he/she enjoy dancing? If yes, please specify (e.g. attended dance lessons, socials).**



**The following is a list of different types of music. Please indicate the individual's 3 most favourite types with 1 being the most favourite, 2 the next and 3 the third favourite.**

\_\_\_\_\_ 1. Country and western

\_\_\_\_\_ 6. Blues

\_\_\_\_\_ 2. Classical

\_\_\_\_\_ 7. Jazz

\_\_\_\_\_ 3. Spiritual/Religious

\_\_\_\_\_ 8. Rock and Roll

\_\_\_\_\_ 4. Big Band/Swing

\_\_\_\_\_ 9. Easy Listening

\_\_\_\_\_ 5. Folk

\_\_\_\_\_ 10. Other \_\_\_\_\_

**Does the individual prefer:**

\_\_\_\_\_ 1. Vocal

\_\_\_\_\_ 2. Instrumental

\_\_\_\_\_ 3. Both

**Please identify as many songs as you can think of that makes the individual feels happy, or that might be connected with happy memories.**

**Please identify any specific songs that you can think of which might make the individual feel sad or that could be associated with distressing memories.**

**Please identify specific artists or performers that the individual most enjoys listening to.**

**Name some albums that the individual has in his/her personal music library.**

## APPENDIX 4

# EXAMPLES OF SONGS BY GENRE AND DECADE

### CLASSICAL MUSIC

TITLE	COMPOSER	BPM (APPROXIMATION)
Arioso, from Cantata BWV 156	J. S. Bach	44
Adagio in G Minor	Albinoni	53
Gymnopédie	Satie	40
Nimrod, from Enigma Variations	Elgar	52
Canon in D	Pachelbel	40
Meditation from <i>Thais</i>	Massenet	52
<i>Mio Babbino Caro</i>	Puccini	78
On the Beautiful Blue Danube	Strauss	55
Ave Verum Corpus, K618	Mozart	70
Jesu, Joy of Man's Desiring	J. S. Bach	65
Sheep May Safely Graze	J. S. Bach	60
String Quartet in F	Hoffstetter	72
Magnificat, Gloria Patri	J. S. Bach	80
Nessun Dorma	Puccini	60
Ave Maria	Caccini	74
Clarinet Concerto	Mozart	98
Air on the G string	J. S. Bach	78
Nocturne in E flat major, Opus 9, No. 2	Chopin	74
Piano Concerto No. 21, Andante	Mozart	60
Cello Suite No 1, 1 <sup>st</sup> movement	J. S. Bach	80
Peer Gynt Suite No 1., Morning Mood	Edvard Grieg	100
Dance of the Swans	Tchiakovsky	100
Minuet, from Quintet in E major	Boccherini	88
Claire de Lune	Debussy	74
Be Thou But Near	J. S. Bach	84
Trumpet Concerto in D	Telemann	58

\*Note – Many classical pieces have variations in tempo throughout the performance. Tempo and duration may also differ depending on the recording.

## COUNTRY MUSIC

TITLE	ARTIST	DURATION	BPM	DECADE
Mexicali Rose	Johnny Bond	2:48	110	1940
Wild Side of Life	Hank Thompson	2:45	116	
Smoke On the Water	Red Foley	2:44	111	
When My Blue Moon Turns to Gold Again	Walker & Sullivan	2:35	79	
Blueberry Hill	Gene Autry	2:37	106	
Bouquet of Roses	Eddy Arnold	2:33	68	
The Song from Moulin Rouge	Andy Williams	2:23	95	1950
Tennessee Waltz	Patti Page	3:05	87	
The Rains Came	Freddy Fender	2:16	116	1960
Lay Lady Lay	Bob Dylan	3:17	80	
A Single Girl	Sandy Posey	2:24	109	
Back in the Arms of Love	The Spinners	3:51	104	
You Are My Sunshine	Elizabeth Mitchell	2:49	92	
You Were Always On My Mind	Willie Nelson	3:36	72	1970
Country Roads	John Denver	3:18	84	
Fire On the Mountain	Marshall Tucker Band	3:56	102	



## POPULAR, EASY LISTENING, RNB, SOUNDTRACK

TITLE	ARTIST	DURATION	BPM	DECADE
If You Were the Only Girl in the World	Dick Haymes	2:53	85	1940
White Christmas	Bing Crosby	2:57	104	
Danny Boy	Various			
When I Grow Too Old to Dream	Foster & Allen	2:21	116	
Lily Marlene	Marlene Dietrich	3:24	104	
In the Wee Small Hours of the Morning	Frank Sinatra	2:59	69	
White Cliffs of Dover	Vera Lynn	3:03	83	
I'll Be Seeing You	Billie Holiday	3:31	64	
Don't Worry 'Bout Me	Billie Holiday	3:11	64	
Magic Moments	Perry Como	2:39	108	1950
Let's Do It (Let's Fall In Love)	Ella Fitzgerald	3:35	80	
Perhaps, Perhaps, Perhaps	Doris Day	2:43	108	
You Belong to Me	Jo Stafford	3:18	76	
Little Things Mean A Lot	Kitty Kallen	3:00	84	
I'll Be Home	The Flamingos	2:54	84	
Que Sera Ser	Doris Day	2:32	60	
Unchained Melody	Righteous Brothers	3:37	72	
Secret Love	Doris Day	3:37	76	
Because You're Mine	Mario Lanzo	3:30	40	
Edelweiss	Rogers & Hammerstein	1:43	108	
Oh Donna	Ritchie Valens	2:58	68	
Unforgettable	Nat King Cole	2:31	68	
Hello Young Lovers	Frank Sinatra	3:45	60	
You Made Me Love You	Dean Martin	3:21	84	

TITLE	ARTIST	DURATION	BPM	DECADE
Something Stupid	Frank Sinatra, Nancy Sinatra	2:38	108	1960
Juliet	The Four Pennies	2:23	70	
Moon River	Andy Williams	2:44	68	
Roses are Red	Bobby Vinton	2:38	108	
Wishin' and Hopin'	Dusty Springfield	2:57	108	
Stranger on the Shore	The Ventures	2:31	116	
Tell Laura I Love Her	Ricky Valance	2:40	116	
It's Only Make Believe	Conway Twitty	2:35	80	
The Lonely Surfer	Jack Nitzsche	2:34	104	
These Arms of Mine	Otis Redding	2:33	60	
Walking the Dog	Rufus Thomas	2:38	116	
Hi-Heel Sneakers	Tommy Tucker	4:03	84	
Save the Last Dance for Me	The Drifters	2:29	76	
Baby Elephant Walk	Henry Mancini	2:41	60	
If I Were A Rich Man	Jerry Bock	5:07	72	
Little Wing	Jimi Hendrix	2:26	68	
Hey Jude	Beatles	8:10	72	
West Side Story Medley	Leonard Bernstein	4:45	88	
Daisy, Daisy (Bicycle Built for Two)	Nat King Cole	1:45	68	
And I Love Her	The Beatles	2:29	60	
You'll Never Walk Alone	Gerry and the Pacemakers	2:48	76	

TITLE	ARTIST	DURATION	BPM	DECADE
True Blue	John Williamson	4:06	56	1970
I Will Always Love You	Dolly Parton	3:19	68	
Stand By Your Man	Tammy Wynette	2:13	56	
Help Me Make it Through the Night	Kris Kristofferson	4:05	88	
Satin Sheets	Jeanne Pruett	3:03	56	
The Entertainer	Marvin Hamlisch	3:00	80	
At Seventeen	Janis Ian	4:59	64	
Send in the Clowns	Barbara Streisand	4:37	44	
Cavatina	Stanley Myers	4:21	60	
I Can't Tell You Why	The Eagles	4:55	92	
I Honestly Love You	Olivia Newton John	3:40	76	
Puppy Love	Paul Anka	2:43	72	
You're a Lady	Peter Skellern	4:35	92	
Tonight's the Night	Rod Stewart	4:00	96	
How Deep Is Your Love	Bee Gees	3:58	108	
Vincent	Don Maclean	3:58	54	
From Little Things Big Things Grow	Paul Kelly	6:52	60	

## FOLK MUSIC

TITLE	ARTIST	DURATION	BPM	DECADE
Boll Weevil Holler	Vera Holler	2:03	76	1960
Bridge Over Troubled Water	Simon & Garfunkel	4:52	88	
We'll Sing in the Sunshine	Gale Garnett	2:59	107	
Proud Maisie	Davy Graham & Shirley Collins	4:04	68	
The Carnival is Over	The Seekers	3:13	76	
Dress Rehearsal Rag	Leonard Cohen	6:06	94	
All Kinds of Everything	Dana Scallan	3:05	100	1970
The Foggy, Foggy Dew	various			
Waly Waly (The Water Is Wide)				
Nottamun Town				
Reyardine				
Marble Halls				
Sweet Polly Oliver				
The Minstrel Boy				
The Lincolnshire Poacher				
Tom Bowling				



## JAZZ & SWING

TITLE	ARTIST	DURATION	BPM	DECADE
Honeysuckle Rose	Fats Waller	2:38	156	1940
Blues in the Night	Ella Fitzgerald	7:11	80	
Memories of You	Benny Goodman	3:20	86	
Ain't Misbehavin	Fats Waller	3:58	98	
Bop, Look and Listen	George Shearing Quintet	2:57	116	1950
Ev'ry Time We Say Goodbye	Ella Fitzgerald	3:34	80	
I Get Along Without You Very Well	Chet Baker	3:00	103	
Blue in Green	Miles Davis	5:38	76	
Can't Help Lovin' Dat Man	Ava Gardner	3:23	< 80	1960
Try Me	James Brown	2:33	72	
Non, Je Ne Regrette Rien	Edith Piaf	2:22	92	
Is that All There Is?	Peggy Lee	4:22	108	

## HYMNS & RELIGIOUS

TITLE	ARTIST	DURATION	BPM	DECADE
How Great Thou Art	various			
Come You Not From Newcastle				
Just A Closer Walk With Thee				
Swing Low, Sweet Chariot				
Deep River				
Great Is Thy Faithfulness				
A Mighty Fortress is Our God				
Onward Christian Soldiers				
All Things Bright and Beautiful				
Let All Mortal Flesh Keep Silent				
Nearer to God, To Thee				
Jerusalem				



## APPENDIX 6

# LISTENING DIARY AND MUSIC USAGE PLAN

## LISTENING DIARY

Keep a record of music listening and the person's response over a 2-week period in the template below.

**Person with Dementia's Name:**

[illegible]

## DEVELOPING THE MUSIC USAGE PLAN

To develop a plan for future music use with each person with dementia consider the following questions based on the data recorded in the Listening Diary:

1. Which particular songs were useful for reducing agitation?
2. Which particular songs were useful for increasing alertness?
3. Which songs were useful for distracting the person or managing difficult behaviour?
4. Which songs were useful for cheering the person up?
5. Which songs were useful for helping the person to sleep?
6. Which songs resulted in negative reactions? Have these been deleted from the playlists?
7. Which times of day was it most useful to play music to this person and which playlist was used at these times?
8. Which listening situation was most comfortable for the person? (E.g. did they prefer to listen without headphones, and in a solitary place?)
9. On average, how long did the person listen before losing interest?
10. How often during a 1-week period was this person able to listen to the same playlist before it lost its effect?

## TEMPLATE FOR MUSIC USAGE PLAN

Person with Dementia's Name:

PLAYLIST NAME	TIME OF DAY TO BE USED (E.G. A.M., BEFORE SLEEP)	SYMPTOMS FOR WHICH IT IS USEFUL (E.G. WHEN AGITATED)	HOW OFTEN TO BE USED (E.G. ONCE PER DAY)	HOW LONG TO BE USED (E.G. 30 MINS)





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