



Music for Mood & Memory

The Benefits of Music for People with Alzheimer's Disease and Dementia

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In recent years, significant research has been conducted across a series of studies to consider, engage with and prove the various positive impacts of music on people living with Alzheimer's disease (AD) and dementia.¹ Music — as is well documented — can be a highly efficient therapeutic tool in the management of parts of these conditions, particularly in terms of stimulating musical memory, facilitating emotional regulation, and managing anxiety levels.² This white paper will give an introduction to and an overview of some of these studies, and consider some of the possibilities offered by music and musical play for managing the symptoms of and improving the quality of life for those living with Alzheimer's disease and dementia.

Listening to and playing music are activities that have the capacity to greatly enrich human life, from its earliest to its final stages. Music is a medium that has been proven time and time again to promote happiness and wellbeing in the lives of people of all ages and backgrounds.

Music is well known as a prominent art form, a vessel for entertainment, and source of pleasure, but it is also increasingly well-documented as being a valid and powerful form of therapeutic medicine for the body and the brain. Music crosses all sorts of imposed cultural, linguistic, generational, and gendered boundaries, and serves as a space for developing connections between all people, across various lines of difference. This is a widely cited and well known argument for music's ability to facilitate connection. However, even within our own brains — of which music activates and wakes up both the left and the right-hand sides — musical engagement has the ability to forge its own internal connections: creating new neural pathways and lines of communication inside the brain.³ This process comes under the umbrella term 'neuroplasticity'.

The Benefits of Music for Seniors

Music is increasingly used as a tool to encourage this neuroplastic 'rewiring' of the brain by music therapists and researchers in various fields. These researchers and therapists tend to be working on developing methods to rediscover and forge new psychological pathways with clients, patients, and volunteers experiencing a range of neurological and psychological conditions, including Alzheimer's disease and dementia.⁴ Music therapy is defined by the American Music Therapy Association (AMTA) as 'the clinical and evidence-based use of music interventions within a therapeutic relationship to accomplish individualized goals by a credentialed professional who has completed an approved music therapy program'.⁵

The AMTA Scope of Practice document gives various examples of the methodologies that might be used in music therapy: 'music improvisation, receptive music listening, songwriting, lyric discussion, music and imagery, singing, music performance, learning through music, music combined with other arts, music-assisted relaxation, music-based patient education, electronic music technology, adapted music intervention, and movement to music'.⁶ In recent years, a series of studies have been carried out to explore some of the effects of music on patient wellbeing and active symptoms in these contexts.

¹ Baird, A., & Samson, S. 'Music and dementia'. *Progress in brain research*, vol. 217, 2015. pp. 207-235. p. 207.

² Cooke, Marie L., et al. 'A randomized controlled trial exploring the effect of music on agitated behaviours and anxiety in older people with dementia.' *Aging and mental health*, vol. 14, no. 8, 2010. pp. 905-916.

³ Stegemöller, Elizabeth L. 'Exploring a neuroplasticity model of music therapy.' *Journal of Music Therapy*, vol. 51, no. 3, 2014. pp. 211-227.

⁴ Herholz, S. C., Herholz, R. S., & Herholz, K. 'Non-pharmacological interventions and neuroplasticity in early stage Alzheimer's disease.' *Expert review of neurotherapeutics*, vol. 13, no. 11, 2013. pp. 1235-1245; Brancatisano, O. et al. 'Why is music therapeutic for neurological disorders?: The Therapeutic Music Capacities Model.' *Neuroscience and Biobehavioral Reviews*, vol. 112, 2020. pp. 600-615.

⁵ American Music Therapy Association. 'Definition of Music Therapy.' 2018. <https://www.musictherapy.org/about/quotes/>. Accessed 15 August 2021.

⁶ American Music Therapy Association. 'Scope of Music Therapy Practice.' 2015. https://www.musictherapy.org/about/scope_of_music_therapy_practice/. Accessed 15 August 2021.

The benefits of music for seniors are very well known and have been the subject of numerous studies. One study, co-conducted in 2018 by Annemieke Vink and Suzanne Hanser, however, explains that there is still much research that needs to be done in order to accurately assess the direct impacts of music-based therapeutic interventions for individuals with dementia.⁷ Further study in this area, they suggest, is necessary in order to be able to make clear statements about how to measure its benefits on older adults, and how to assess which methods are most useful in the managing (and, at times, alleviating) the symptoms of Alzheimer's disease and other forms of dementia. However, the article still concludes that 'music therapy or music-based interventions can be beneficial for the care of people with dementia', that 'the benefits of utilizing music therapy strategies are multi-faceted', and that 'active engagement with music [has] a strong influence on individuals with varying degrees of dementia'.⁸

In an earlier study, also conducted by Suzanne Hanser — chair of the Music Therapy Department at the Berklee College of Music in Boston — and Larry W. Thompson, the following specific health benefits of music-making for older adults were identified:

- Lowered blood pressure
- Decreased heart rate
- Reduced stress
- Lessened anxiety and depression
- Enhanced immunological response, which enabled participants to fight viruses.⁹

Since this early study in 1994, further investigations with further advanced methods have confirmed these benefits. In 2019, Michele Biasutti and Anthony Mangiacotti conducted a study that particularly looked into whether music training had any impact on depressed mood and general cognitive function in older adults. They utilised a mix of qualitative and quantitative data collection methods, which included standardized measures (Mini-Mental State Examination and Geriatric Depression Scale), and qualitative 'follow-up semi-structured interviews'.¹⁰ During the trial, participants engaged in a range of improvisational music-making activities, which proved to be effective. A 'significant improvement [in] cognitive level' and a 'significant improvement in depression index' were measurably observed in the group who engaged in musical play (aged 62 to 95), compared with the control group who saw no improvement in either area during the experiment's time frame. The study concluded that 'these types of music training sessions could [therefore] provide aid to control the symptoms of depression, delay the deterioration of cognitive function, and enhance social-cognitive function, especially in individuals presenting with cognitive impairment'.¹¹ Outdoor musical instruments such as those made by Percussion Play are designed to encourage people of all ages to participate in making music and to enjoy the health benefits that Vink, Hanser, Mangiacotti, Biasutti and many others have identified. By enabling older adults in particular to engage with rhythm and percussion instruments, music therapists and caregivers open up the possibility for them to experience both psychological and physiological benefits. This kind of physical engagement in music therapy requires the active use of a variety of different grips and hand positions, in order to produce different sounds on the musical instruments. This means that when the participants play the instruments, they are not only working to maintain their coordination and balance, but simultaneously improving their mobility and posture, increasing their energy levels, and developing the use of their fine and gross motor skills. Perhaps even more importantly, these kinds of music therapies give older adults opportunity to have fun, reduce anxiety levels and depressive symptoms, stimulate memories, and live in the moment.

⁷ Vink A, Hanser S. 'Music-Based Therapeutic Interventions for People with Dementia: A Mini-Review.' *Medicines*, vol. 8, no. 4, 2018. p. 109.

⁸ Ibid.

⁹ Hanser, S. and Thompson, Larry W. 'Effects of Music Therapy Strategy on Depressed Older Adults'. *Journal of Gerontology: Psychological Sciences*, vol. 49, no. 6, 1994. pp. 265-269.

¹⁰ Biasutti, M. and Mangiacotti, A. 'Music Training Improves Depressed Mood Symptoms in Elderly People: A Randomized Controlled Trial.' *The International Journal of Aging and Human Development*, vol. 92, no. 1, 2021. pp. 115-133. p. 115. doi.org/10.1177/0091415019893988

¹¹ Ibid. pp. 115-116.

The fact that music exhibits a trend of enhancing mood and increasing positive emotions in seniors is supported by evidence across a wide range of sources. As well as the studies already mentioned above, various experiments have been carried out over the past few decades into the impacts of music on mood and emotional health in seniors. One study, conducted at Stanford, used a music-facilitated psychoeducational strategy, which combined home visits and phone calls between music therapists and elderly participants, to test the effectiveness of music as a non-pharmaceutical therapeutic aid for seniors experiencing depressive symptoms. The thirty older adults involved in the study had each been diagnosed with either a minor or major depressive disorder, and each of them were over eighty years of age. The study concluded that participants in this weekly music therapy were less anxious, less distressed, and had higher self-esteem than those who did not. Significantly, these clinical improvements were maintained over a nine-month follow up period.¹²

The instruments made by Percussion Play are specially designed so that whichever order the notes are played in, the sound is always harmonic. This means that feelings of frustration in the musician are eliminated because anything and everything they play sounds right. This inspires self-confidence and reduces stress and anxiety which is of great importance in senior care. Because the musical instruments made by Percussion Play produce pleasing harmonies regardless of how they are played, there are no rules or limitations, and the person playing the instrument does not feel held back in any way. This encourages freedom of expression and satisfaction, aspects of life that can, for various reasons, sometimes be lacking in the lives of older adults.

Alzheimer's Disease and Dementia

The restorative power of music to heal us is even more noticeable in the lives of seniors who are suffering from Alzheimer's disease and dementia. According to the Alzheimer's Society, there are currently more than six million Americans living with Alzheimer's, and the disease kills more people annually than breast cancer and prostate cancer combined. Alzheimer's-related mortality rates have risen by an estimated 16% since the beginning of the COVID-19 pandemic in 2019. In 2021, the Alzheimer's Association estimates that Alzheimer's and other forms of dementia are set to cost the nation \$355 billion, and it is predicted that this might rise to over \$1.1 trillion by 2050. The Alzheimer's Association explains that more than eleven million American citizens provide unpaid care to people living with these conditions, and that racial discrimination against minority groups in the US disproportionately inhibits people of colour from accessing proper Alzheimer's related healthcare, with 50% of interviewed Black Americans, 42% of Native Americans, 34% of Asian Americans, and 33% of Latinx Americans reporting discrimination when seeking health care of this nature.¹³ Clearly, Alzheimer's disease, along with other forms of dementia, are causing increasing levels of distress, disruption, and loss, across all sectors of American society. The disease is so prevalent that the American Society for Consultant Pharmacists has stated that Alzheimer's disease and dementia are among the most common chronic diseases afflicting seniors today.¹⁴

As explained by the National Institute on Aging, dementia refers to a 'loss of cognitive functioning – thinking, remembering, and reasoning – to such an extent that it interferes with a person's daily life and activities'.¹⁵ Alzheimer's disease is a degenerative and progressive form of dementia that occurs when proteins build up in the brain. This leads to damage and loss of connectivity between nerve cells and then, as the disease progresses, to the eventual death of nerve cells and the loss of brain tissue. Because Alzheimer's is a progressive disease, more and more parts of the brain become damaged over time, and the symptoms of the disease increase in severity. The latter stages of dementia can involve problems with:

¹² Hanser, S. and Thompson, Larry W. 'Effects of Music Therapy Strategy on Depressed Older Adults'. *Journal of Gerontology: Psychological Sciences*, vol. 49, no. 6, 1994. pp. 265-269.

¹³ 'Facts and Figures.' *Alzheimer's Association*. 2 March 2021. <https://www.alz.org/alzheimers-dementia/facts-figures>

¹⁴ 'Understanding Chronic Conditions and Helping Aging Parents Stay at Home.' *ParentGiving*, 2010. <https://www.parentgiving.com/elder-care/common-chronic-conditions-and-aging-at-home/> Accessed 14 August 2021.

¹⁵ 'What is Dementia? Symptoms, Types, and Diagnosis'. *National Institute on Aging*, 2nd July, 2021.

- Memory loss
- Communication
- Reasoning
- Orientation

The Benefits of Music for Alzheimer's and Dementia

The results of a 2010 study conducted by Catherine Y. Wan and Gottfried Schlaug¹⁶ demonstrated that music engages areas of the brain which are involved with paying attention, making predictions, and updating events in our memory. Utilising musicians as 'human model[s] for studying the brain effects of acquiring specialized sensorimotor skills' – for example, learning to associate particular fine and gross motor movements with the audiosensory experience of hearing particular sounds – Wan and Schlaug looked into what this could mean for people living with neurological conditions such as Alzheimer's disease. The study argued for the potential for 'music making as an interactive treatment or intervention for neurological and developmental disorders, as well as those associated with normal aging'.¹⁷ The study concluded that playing music is a particularly beneficial therapeutic tool for people with Alzheimer's disease and dementia, ultimately because music targets the areas of the brain that are most affected by the disease.¹⁸ The results of this study, which focused largely on brain plasticity (neuroplasticity), also concluded that seniors over the age of 75 who frequently played a musical instrument were less likely to have developed dementia when compared to those who rarely played a musical instrument.¹⁹

Whilst there is still no medical cure for Alzheimer's disease or other forms of dementia, there is a growing body of evidence that playing an instrument can significantly lower the risk of contracting the disease in the first place.²⁰ It should come as no surprise, therefore, that research has also shown how playing an instrument likewise benefits those who are already living with dementia, regardless of whether they have previously played an instrument. One of the reasons why music therapy in general, and playing musical instruments in particular, is so effective in terms of helping people to live more comfortably with dementia due to music's suitability to non-verbal communication and emotional regulation. Because individuals in the latter stages of the disease are often non-verbal and can become agitated and frustrated by sensory overload, music provides a path through which people living with dementia and Alzheimer's are able to process, regulate, and communicate their emotions.²¹

Engaging people living with dementia in singing, rhythm playing, dancing, physical exercise, and other structured musical activities can work to alleviate these often distressing symptoms and offer a powerful distraction from the agitation and frustration that the individual might feel. Outdoor musical instruments in senior living centres, care homes, and nursing homes, such as those produced by Percussion Play, are particularly beneficial for patients, as they encourage the patient to exercise, to be outdoors, and to play music all at the same time.

Researchers at the University of Miami have revealed that music therapy with Alzheimer's patients leads to increased levels of melatonin, serotonin, norepinephrine, epinephrine, and prolactin. The study concluded that the *increased levels of melatonin*, in particular, may have contributed to the patients' relaxed and calm mood, as well as enabling better sleep quality.²² Another study, more recently, shared quantitative evidence for the positive effects of music interventions in terms

¹⁶ Wan, C. Y., and Schlaug, G. 'Music Making as a Tool for Promoting Brain Plasticity across the Life Span.' *Neuroscientist*, vol. 16, no. 5, 2010. pp. 566-577.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Balbag MA, Pedersen NL, Gatz M. 'Playing a Musical Instrument as a Protective Factor against Dementia and Cognitive Impairment: A Population-Based Twin Study.' *Int J Alzheimers Dis.*, 2014. 836748. doi:10.1155/2014/836748

²¹ 'Communication in the later stages of dementia.' *Alzheimer's Society: United Against Dementia*. Factsheet 417LP, May 2017. https://www.alzheimers.org.uk/sites/default/files/2019-09/factsheet_the_later_stages_of_dementia.pdf

²² Kumar AM, Tims F et al. 'Music Therapy Increases Serum Melatonin Levels in Patients with Alzheimer's Disease' *Alternative Therapies in Health and*

of lowering anxiety levels in Alzheimer's patients, measuring these by observing alterations in cortisol levels present in the patients' saliva.²³

The increase of these feel-good chemicals in the brain can result in these following psychological and physiological effects:

- Boost in mood
- Reduction in stress levels
- Reduction in agitation
- Improvement in coordination
- Improvement in cognition

The Miami study also concluded that even after Alzheimer's disease has progressed, and the cognitive function of the brain has slid into decline, the human brain still naturally responds to music. These benefits, the study confirms, continue to be experienced even after the music has stopped playing.²⁴

For this reason, outdoor musical instruments, such as the ones designed and produced by Percussion Play, can have a really important place in the therapy for people living with dementia. Even a short session making music and playing with the musical instruments can have a long-lasting impact on the person's mood and on their brain function.

Alzheimer's is a disease that, even in its early stages, can sometimes cause the person living with it to become anxious, irritable, and depressed. Many Alzheimer's and dementia patients become withdrawn, and lose interest in activities and hobbies. Music has repeatedly been proven to be a medium that continues to inspire and connect with individuals, even when interest in other pursuits has diminished. For this reason, music interventions and music therapy programmes attract high levels of engagement from patients, and low drop out rates.²⁵ Indeed, the response of many individuals living with dementia to playing music and to experiments in music therapy has been reported as significant, consistent and positive.²⁶ Even as an individual approaches the final stages of dementia, and experiences more pronounced problems with straightforward thinking, reasoning, perception, and communication, they are often still able to engage with music on some level, particularly rhythm playing and singing. This is because these activities do not require full cognitive functioning for success, and the necessary cognitive processes for these activities appear to largely remain resistant to the onset of Alzheimer's disease and other forms of dementia.

The Benefits of Music for Memory

One of the most powerful properties of music is that it has an amazing ability to reach parts of the damaged brain in a way that other forms of communication cannot. This is why music therapy for dementia patients, and perhaps outdoor forms of this kind of therapy, can be so effective.

Outdoor music making is particularly beneficial to seniors and to those living with dementia because it provides exercise and

Medicine, vol. 5, no. 6, 1999.

²³ de la Rubia Ortí, J.E., García-Pardo, M.P., Iranzo, C.C., Madrigal, J.J.C., Castillo, S.S., Rochina, M.J. and Gascó, V.J.P. 'Does music therapy improve anxiety and depression in alzheimer's patients?' *The Journal of Alternative and Complementary Medicine*, vol. 24, no.1, 2018. pp. 33-36.

²⁴ Kumar AM, Tims F et al. 'Music Therapy Increases Serum Melatonin Levels in Patients with Alzheimer's Disease' *Alternative Therapies in Health and Medicine*, vol. 5, no. 6, 1999.

²⁵ > Gallego, M.G. and García, J.G. 'Music therapy and Alzheimer's disease: Cognitive, psychological, and behavioural effects.' *Neurología (English Edition)*, vol. 32, no. 5, 2017. pp. 300-308.

²⁶ Sakamoto, M., Ando, H. and Tsutou, A. 'Comparing the effects of different individualized music interventions for elderly individuals with severe dementia.' *International Psychogeriatrics*, vol. 25, no. 5, 2-13. pp. 775-784.

stimulation outside of the four walls of their living accommodation. Current guidelines for caring for people living with Alzheimer's and dementia specify the necessity of paying attention to the conditions of the physical environments in which people with Alzheimer's and dementia live, which includes garden accessibility and design.²⁷ a result of these guidelines, it has been observed that gardens and outdoor spaces are likely to play an increasingly significant role in Alzheimer's and dementia care facilities.²⁸ Being outside in the fresh air has a hugely positive impact on a person's mental and physical health because it breaks up the monotony of the daily routine and enables the senior to access fresh air and sunlight: all of which are proven to improve mood and well-being. Additionally, being outside means that Vitamin D, which is necessary for maintaining healthy bones, as well as reducing the risks of developing heart disease,²⁹ flu,³⁰ and multiple sclerosis,³¹ is naturally available. The fact that outdoor musical instruments are so engaging, pleasing to play, and suitable for all weathers means that people are often more likely to stay outside for much longer than they might do normally: therefore maximizing the health benefits that being outside provides.

Although memory loss is usually one of the earliest symptoms of Alzheimer's, it is common for someone with the disease to then go on to develop problems with other aspects of their thinking, reasoning, perception, or communication. For example, it is not unusual for someone with Alzheimer's disease to experience difficulties with:

- Language: they may repeat themselves, experience difficulties with vocabulary and naming objects, or struggle to follow a conversation
- Concentrating, planning or organizing: they may not be able to make decisions, carry out tasks or solve problems.
- Visiospatial problems: they might experience difficulty judging distances and navigating stairs or other obstacles.
- Problems with familiar tasks: they might find it hard to complete daily tasks, such as driving to a familiar location, organizing grocery lists, or remembering the rules of a favorite game.
- Orientation: they might become confused or lose track of the day or date.
- Problems with poor judgment: they may experience alterations in decision-making and judgment, such as poor handling of money or attention to grooming and hygiene.
- Social withdrawal: they may become resistant to, or experience changes in relation to socialising, engaging in previous hobbies, or participating in favorite team activities.³²

The act of listening to music alone — especially music which might be nostalgic for the person living with Alzheimer's or dementia — can indeed help to alleviate some of these symptoms. However, as has been discussed, active participation in making music on musical instruments like those produced by Percussion Play can bring about even more positive results, due to the fact that the whole body is engaged. Both physically and psychologically, people living with Alzheimer's and dementia experience huge therapeutic benefits — as the series of studies cited above make clear — when actively creating, rather than just responding passively to the sounds. Concetta Tomaino, the executive director and co-founder of the Institute for Music and Neurologic Function, states that:

²⁷ National Collaborating Centre for Mental Health. 'Dementia.' *Dementia: A NICE-SCIE Guideline on Supporting People With Dementia and Their Carers in Health and Social Care*. 2007.

²⁸ Whear, R., Coon, J.T., Bethel, A., Abbott, R., Stein, K. and Garside, R., 2014. 'What is the impact of using outdoor spaces such as gardens on the physical and mental well-being of those with dementia? A systematic review of quantitative and qualitative evidence.' *Journal of the American Medical Directors Association*, vol. 15, no. 10, 2014. pp. 697-705.

²⁹ Wang, T.J., Pencina, M.J., Booth, S.L., Jacques, P.F., Ingelsson, E., Lanier, K., Benjamin, E.J., D'Agostino, R.B., Wolf, M. and Vasani, R.S., 2008. Vitamin D deficiency and risk of cardiovascular disease. *Circulation*, 117(4), pp. 503-511.

³⁰ Urashima M, Segawa T, Okazaki M, Kurihara M, Wada Y, Ida H. Randomized trial of vitamin D supplementation to prevent seasonal influenza A in schoolchildren. *The American Journal of Clinical Nutrition*, vol. 91, no. 5, 2010. pp. 1255-60. doi: 10.3945/ajcn.2009.29094.

³¹ Munger KL, Levin LI, Hollis BW, Howard NS, Ascherio A. Serum 25-Hydroxyvitamin D Levels and Risk of Multiple Sclerosis. *JAMA*. 2006;296(23):2832-2838. doi:10.1001/jama.296.23.2832

³² '10 Early Signs and Symptoms of Alzheimer's.' *Alzheimer's Association*. June 2019. <https://www.alz.org/media/Documents/alzheimers-dementia-10-signs-worksheet.pdf> Accessed 17 August 2021.

'We now know from clinical case studies that music can affect — in very specific ways — human neurological, psychological, and physical functioning in areas such as learning, processing language, expressing emotion, memory, and physiological and motor responses'.³³

It would seem, then, that any opportunity to engage those experiencing loss of memory in active music-making should be embraced. Indeed, music therapy is becoming a regular activity in senior living communities across the globe, and there is ever-increasing interest in the use and role of nonpharmacological interventions to improve and manage the symptoms of Alzheimer's and dementia in older adults.³⁴ In America, some forms of music therapy are even covered by medical insurance, proof indeed of that the therapeutic and medicinal benefits of music-making for people living with Alzheimer's disease and dementia — as well as a range of other neurological and psychological conditions — are now considered in medical circles to be self-evident and irrefutable.

The Benefits of Music for Communication

Even in the later stages of dementia, when memory fades and human interactions can become increasingly difficult and distressing, patients can still connect with music. Playing instruments together creates critical opportunities for connection between caregivers and patients alike, due to music's innate capacity to initiate and facilitate:

- Sensory arousal
- Sensory awareness
- Familiarity
- Comfort
- Community
- Success

This is why forms of music therapy have been used for centuries to relieve stress and promote a sense of well-being in an individual. By incorporating music into the life of someone living with Alzheimer's or dementia, you can help them to experience its many profound benefits. Percussion Play understands this and creates robust, tactile, and aesthetically pleasing outdoor instruments that can be played easily by anyone, regardless of age or of their physical, mental, or emotional state. One study, conducted by Hanne Mette Ridder and Elisabeth Gummesen, considered the effects of music on the communicative capacities of people with advanced dementia.³⁵

Participants in the study were all experiencing aphasia (severe difficulty with language and/or speech) and communicative difficulties. The study explored the possibilities for 'extemporizing' (improvisational music-making or composition) as a communicative aid to address the psychosocial needs of people living with dementia. The results of Ridder and Gummesen's study suggested that this kind of musical therapy thus functioned as a 'valuable method' for enabling communication and psychosocial interaction in people with aphasia and communicative difficulties as a result of advanced dementia.³⁶ Both carers and patients alike can experience the benefits that playing outdoor instruments present, and by doing so together can

³³ Altman, R 'The Powerful Effects of Music in Memory Care.' *Huffpost*, 23 September, 2013.

³⁴ Snyder, M., Egan, E.C. and Burns, K.R. 'Interventions for decreasing agitation behaviors in persons with dementia.' *Journal of Gerontological Nursing*, vol. 21, no. 7, 2021.

³⁵ Ridder, H. M., & Gummesen, E. (2015). The use of extemporizing in music therapy to facilitate communication in a person with dementia: An explorative case study. *Australian Journal of Music Therapy*, 26, 6-29.

³⁶ *Ibid.*

improve their communication, relationships and bond over a shared experience, as studies have shown.^{37 38}

The Benefits of Drumming

The use of drums for people living with dementia has proven particular health and social benefits, as many studies have confirmed. One of these, carried out by Alicia Ann Clair, Barry Bernstein, and Gary Johnson, investigated – and demonstrated – the ‘success of rhythm applications using drums with persons in late stage dementia’.³⁹ Drumming is an excellent social activity for older adults and supports social integration whilst reducing feelings of loneliness, anxiety, and isolation. This is because drumming allows for non-verbal ‘conversation’ to take place, as one drummer listens to and responds to the pattern of another person’s drumming. For people living with dementia, particularly those finding that their ability to communicate is reduced and their language skills compromised, the feeling of being able to communicate can be overwhelming. Witnessing a change in the demeanor of their loved one as they rediscover their ability to communicate can be very moving for carers and relatives.

The outdoor drums made by Percussion Play can be played by more than one person at a time, and so have the capacity to foster social interaction and a sense of community. The ability to connect with others in meaningful ways and develop a sense of authentic community is an essential aspect of life: one which people living with Alzheimer’s and dementia often begin to lose out on as their conditions become more advanced. Drumming, especially in group therapy contexts, provides a space for these pockets of community and connection to be rebuilt for Alzheimer’s and dementia patients, even as their conventional communicative abilities fade.

Among the other benefits of playing the drums are:

- Improved musical coordination and brain activity
- Physical therapy
- Stress relief
- Improved social skills such as team work
- Improved self-esteem
- Better self discipline
- Improved abstract thought processes
- Improved ability for creative expression
- A balance for internal energy
- Life-long enrichment
- A great mood lifter
- Physical fitness
- Responsibility
- Fun alternative to other less productive activities.⁴⁰

³⁷ Hsu, M.H., Flowerdew, R., Parker, M., Fachner, J. and Odell-Miller, H., 2015. Individual music therapy for managing neuropsychiatric symptoms for people with dementia and their carers: a cluster randomised controlled feasibility study. *BMC geriatrics*, vol. 15, no. 1, pp. 1-19.

³⁸ Clair, A.A. and Ebberts, A.G. 1997. The effects of music therapy on interactions between family caregivers and their care receivers with late stage dementia. *Journal of Music Therapy*, vol. 34, no. 3, pp.148-164.

³⁹ Clair, A.A., Bernstein, B. and Johnson, G., 1995. ‘Rhythm playing characteristics in persons with severe dementia including those with probable Alzheimer’s type.’ *Journal of music therapy*, vol. 32, no. 2, 1995. pp.113-131

⁴⁰ ‘Drumming increases heart rate and blood flow just like an aerobic exercise. Music education is imperative for brain power.’ *Newswire Today*, 2007.

The Power of Percussion Play

The outdoor musical instruments created by Percussion Play are diverse and accessible to everyone and make perfect additions to any setting, particularly gardens and social spaces in senior living communities, care homes, nursing homes, hospices, and hospitals. In these settings, the musical instruments can be used and enjoyed by both residents and their carers. Anyone and everyone can access the health benefits that playing these wonderful instruments provides, and Percussion Play instruments are currently being installed in these types of setting all over the world.

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