



EMRAN: Art, music and open spaces for LTCIs

www.nottingham.ac.uk/emran



East Midlands Research into Ageing Network (EMRAN) Discussion Paper Series

ISSN [2059-3341]

Issue 33; November 2020

International and multidisciplinary reflections from Austria, Brazil and the UK on interventions using arts, music, and open spaces for enriching long term care facilities (LTCFs)

Paper authors: Hoedl M¹, Araújo OSCC², King A³, Bestetti MLT⁴, Pompeu JE⁴, da Silva NAME⁴, Hinsliff-Smith K⁵

East Midlands Research into Ageing Network (EMRAN) is a research collaboration across the East Midlands to facilitate applied research into ageing and the care of older people.

EMRAN was set up with support from National Institute of Health Research Applied

Research Collaboration East Midlands (NIHR ARC-EM)

Address for correspondence: Manuela Hoedl, Medical University of Graz, Institute of

Nursing Science, Universitaetsplatz 4/3, 8010 Graz

Email: Manuela.hoedl@medunigraz.at Phone: +43 316 71651







EMRAN: Art, music and open spaces for LTCIs

ORCID:

Hoedl, M 0000-0001-9829-2766

Hinsliff-Smith, K 0000-0003-4259-3118

Affiliations:

- ¹ Medical University of Graz, Austria.
- ² University of Campinas UNICAMP, Brazil.
- ³ Nottinghamshire Healthcare NHS Foundation Trust, UK
- ⁴ University of Sao Paulo, Brazil.
- ⁵ De Montfort University, UK.

ABSTRACT

Background

The WHO report on ageing highlighted that the number of older people worldwide is increasing. Long term care facilities (LTCFs) have become a common feature for providing and meeting the health and social care needs of these older populations in many countries around the world. Focusing on the basic human needs, there is a lack of stimulating activities, for older persons in LTC's. This is especially relevant in times of limited resources, when nursing staff in nursing homes tend to focus on physical needs than on psychological or emotional needs. However, activities involving arts or creativity are recognized as an instrument to support people with dementia, have known benefits for residents with dementia and for those providing care. Therefore, exploring and developing an understanding of interventions based on art, music and open space for enriching LTCFs is needed.

Method

During 2019 a leading group of academics from Austria, Brazil, the Netherlands and UK, met at an international workshop held in Sao Paulo state, Brazil. This workshop was organized under the international LOTUS consortium (Developing an International Collaborative Network to Study Long Term Care Institutions). During the workshop a number of key themes and interest areas emerged. One theme and mutual interest was the use of arts, music and open spaces within LTCFs with an opportunity to share knowledge and discussion of its relevance to LTCFs in the countries







EMRAN: Art, music and open spaces for LTCIs

represented. We share a few examples that the attendees discussed as demonstrating how arts could be more mainstream as a means to engage residents in their daily activities.

Results

In Austria, two public photo exhibitions held within a LTCF has been utilized to stimulate and engage residents. Groups of 4 to 5 residents were invited to take part in a session with a professional photographer, where the residents themselves volunteered to be the model. In Brazil a museum project incorporated a music experience, through the use of archived instruments and photos. And in 2011, based on the need to motivate residents in the activities proposed in Brazilian LTCFs, a project called the "Cooking Workshop" was developed. In UK observations found that 62% of residents, did not access the garden. In addition, no garden-specific activities, such as lawn-mowing, sweeping leaves, gardening, were observed.

Discussion

Our reflections on how arts, as a broad medium, has been incorporated or offered within LTCFs enabled the group to begin to understand some fundamental differences in how arts, music and outdoor space are viewed as an essential offering or as an addition to existing health and social care provision. For example, in Brazil the provision and use of open spaces is a central cultural requirement where residents and staff would freely utilize this space compared to the UK where often garden or outdoor spaces is seen as an 'ad hoc' negotiated space to visit by residents and relatives. It is clear from our discussions that arts in all forms can be incorporated into LTCFs as good practice for simulating and engaging residents but best approaches and the value of its use is often lacking in the planning for such activities and is not widely used.

Keywords: older people, long term care, music intervention, art intervention, gardening, outdoor space, Brazil, UK, Austria







EMRAN: Art, music and open spaces for LTCIs

ABSTRACT	2
BACKGROUND	4
METHOD	
RESULTS	
DISCUSSION	_
CONCLUSIONS AND RECOMMENDATIONS	11
REFERENCES	13

BACKGROUND

The WHO report on ageing highlighted that the number of older people worldwide is increasing and as a consequence this leads to an increased risk of many health disorders [1]. With a growing recognition that diagnosed dementia cases are set to grow to a predicted 130 million globally in the year 2050 [2]. Long term care facilities (LTCFs) have become a common feature for providing and meeting the health and social care needs of these older populations in many countries around the world. LTCFs in this paper are defined according to Sanford et al. [3] - due to the different scientific and regional backgrounds of the engaged researchers "nursing homes" was too narrow and therefore we decided to use the term LTCF.

In the UK, there are approximately 420,000 residents in long LTCFs [4] with the majority over the age of 85 and up to 80% with a dementia diagnosis [5], approximately 6% of the whole population. Austria, with a total population of 8.9 million, has about 90,000 people resident in 870 LTCFs (1%) in 50% public, 25% private for-profit, 25% non-profit homes [6]. This compares to Brazil with a population of over 209 million and estimates of only 117,000 recorded as living in registered LTCFs (0.06%), of which only 78,000 residents are accredited to SUS (the Brazilian Unified Health System) and the total number of institutionalized people, if the index of 1% of the overall elderly population is maintained, should reach around 300,000 Brazilians [7]. The population is ageing in all three countries, at different rates and if different stages of demographic transition. This means ever more people are likely to be living with co-morbidities and polypharmacy (at least 4 medicine or more). Health policies are aimed at supporting independent living, and so those living in LTCFs tend to be older and more reliant upon others for their health and social care needs, including social interactions.

Interventions focusing on art, music and outdoor space in LTCFs

Stimulating activity is a basic human need, yet there is a lack of stimulating activities for older persons in LTCs [8]. This is especially likely in times and settings with limited resources, when nursing staff in LTCFs tend to prioritize physical needs over psychological or emotional needs [9].







EMRAN: Art, music and open spaces for LTCIs

However, activities involving arts or creativity are recognized as an instrument to support people with dementia [10]. Furthermore art interventions offer a non-pharmacological intervention to have known benefits for residents with dementia [11] for those providing care and their resident interactions [10-12]. For example, studies show that music can improve memory, mood and general recognition of the residents [13, 14].

Bestetti (2014) reasoned that the physical environment is intimately associated with the emotional and physical health of those living in it[15]. When older people live in good environmental conditions, autonomy, independence, self-esteem and subjective well-being will increase, in turn influencing quality of life. Tesch-Roemer and Wahl (2016) corroborate this idea when they highlight the need for environmental strategies and resources that use compensatory and optimizing devices to maintain autonomy and well-being through proposals for successful aging [16]. Specific factors for enrichment of environments are for example aesthetic attractiveness or stimulus to the senses [17].

Design guidance for LTCFs for older people suggests that access to a well-designed garden space has potential to enhance the functioning, wellbeing and quality of life of residents, many of whom will be living with dementia [18,19]. Garden spaces can provide a range of opportunities which support personal identity including, relief from the indoor environment, sensory stimulation, socialization, privacy, autonomy and control, exercise and engagement in valued meaningful occupation [20-22]. Additionally, outdoor bright light exposure may positively affect disrupted circadian rhythms [23] and increase vitamin D production[24].

Summarized, several studies have shown the benefits of art, music and open space interventions in LTCFs. However, we aim to develop a deeper understanding of interventions based on art, music and open space for enriching LTCFs by sharing different examples from Austria, Brazil and UK.

METHOD

The LOTUS consortium (Developing an International Collaborative Network to Study Long Term Care Institutions) is an international research collaboration between Austria, Brazil, the Netherlands and UK (https://drive.google.com/file/d/1X0gjl3RI7-moDxeQ54nDeGYRV3htBwIJ/view) aiming to share expertise through research that develops a greater understanding of LTCFs. The included scientists have expertise in conducting research in LTCF and hold close collaborations with LTCFs in their respective country. Therefore, these scientists can stimulate international comparisons between LTCFs in Austria, Brazil, the Netherlands and UK, which on the long run can lead to identifying similarities and differences, that can be used as staring points in future



international collaborative projects.





EMRAN: Art, music and open spaces for LTCIs

This initiative was financed through the Global Challenges Research Fund (GCRF). A workshop was held in April 2019 including more than 40 individuals from across multi-disciplinary interest areas (e.g. social science, architecture, gerontology, geriatrics, nursing research, physio therapy). During the workshop a number of key themes and interest areas emerged [25].

The morning of the first day of the workshop aimed to get a better understanding on LTCFs in Austria, Brazil, the Netherlands and UK. It initially focused on the number of LTCFs, number of people living in LTCFs, characteristics of people living in LTCFs such as age, co-morbidities, average length of time people live in LTCFs. In the afternoon, smaller groups discussed specific issues with LTCFs in Brazil and Europe. As an example, one group discussed staff training, another one funding and quality regulation within LTCFs in Brazil and Europe.

The second day aimed to share expertise and exchange ideas on delivering services and conducting research in LTCFs. Specific presentations were focusing on benchmarking in LTCFs and how such benchmarking initiatives can be used for research and quality improvement projects. In the afternoon, LTCFs were discussed as a place for conducting research, with specific examples such as the Living Lab Model [26] or how to engage LTCF staff as experts in research. Another session was held focusing on applied research in LTC in Brazil such as music therapy, communication and digital narratives and mobile technology applied in the context of LTCFs. In the afternoon again small groups discussed about developing an international research LTCF network or how to use benchmarking as a focus for research and development in Brazil.

Day three focused on different session, of which one interest group focused on engaging with residents in LTCFs. Within our themed workshop, several examples of utilizing arts, music and use of open spaces within LTCFs were discussed. The following sections provide some examples using such approaches in Austria, Brazil and the UK that the authors at the LOTUS consortium discussed.

RESULTS

Multidisciplinary example from Austria







EMRAN: Art, music and open spaces for LTCIs

In Austria, an example where arts had been utilized to stimulate and engage residents relates to two public photo exhibitions held within a LTCF for which consultation and consent was received by residents to take part in this innovative approach. Groups of 4 to 5 residents were invited to take part in a session with a professional photographer, where the residents themselves volunteered to be the model.

The aim for using imaginary was to initiate discussion amongst carers, family, residents and members of the public about the past experiences and previous roles in society of the residents as well as an enjoyable and fun experience for the participants. Such dialogue was used to foster thoughts about seeing more than the 'old person' and think about them and their lived stories.

The first public exhibition took place from in 2014 and the second exhibition in 2017 and each exhibition lasted for 3 months.

The first public exhibition was called "residents of the nursing home". The pictures were based on the individual history of the resident, including for e.g. their former jobs or hobbies (Picture 1).

Picture 1: Picture from the photo exhibition "residents of the nursing home"



Multidisciplinary Brazilian approach







EMRAN: Art, music and open spaces for LTCIs

The project "À Roda dos Objetos" (Around Objects) propose interactions with citizens aged over 60 to work with art and cultural objects (Picture 2) housed in several local museums [27].

Picture 2: Picture from the project "À Roda dos Objetos"



A written informed consent of all participating residents was obtained. This project, that took place in 2018, focused on residents' memories, their cultural and diverse heritage and life experiences. Within the Brazilian culture there is a strong tradition for cooking and a background in agriculture (e.g. sugar and coffee). So, linking to the senses was used to provide possible links for the residents to engage. Using sugar and coffee historical production in local heritage and linking this to the senses enabled all residents, regardless of capacity or disability, to engage in this project. The museum project also incorporated a music experience, through the use of archived instruments and photos. Several different Brazilian musical styles such as "serestas", (serenade in English), were incorporated into the intervention.

The museum interventions were piloted in two LTCFs and two day-care centres in Itu - São Paulo. Each interactive intervention had between eight and fifteen people attending each week along with a weekly excursion to the museum over a 2-month period.

In 2011, based on the need to motivate residents who demonstrated isolation in social settings and lack of engagement in the activities proposed in LTCFs, a project called the "Cooking Workshop" was developed (Picture 3). A written informed consent of all participating residents was obtained. It was based on a resident choice of recipes, which was discussed with family members. There were discussions to define which recipe would be produced in three meetings, one per week. The first would be shared with a relative, the second with friends and the third with visiting children. The







EMRAN: Art, music and open spaces for LTCIs

exchange of experiences and autonomy delegated to the participants showed an approximation among residents and strengthening significant ties.

Picture 3: Picture from the cooking workshop



Use of open spaces in LTCFs - a UK case study

Whilst it is supposed that most LTCF settings in UK possess a garden or outdoor space of some sort, it is not clear if these are used, how frequently and for what purposes. Against this backdrop, a study "Rehabilitation for Outdoor Activities and Mobility (ROAM) study" [28] set out to understand the circumstances under which UK residents used the garden or outdoor spaces at their LTCFs in three study sites.

Using a questionnaire with staff they were able to report that 84% of residents were considered to need supervision/assistance to access the garden space and 68% of their residents with outside mobility. In addition, observations found that 62% of residents, did not access the garden. No garden-specific activities, such as lawn-mowing, sweeping leaves, gardening, were observed. Findings from the observational part of the study confirmed that residents were more likely to visit outside if an activity coordinator was present and the weather was sunny and warm. Whilst some care staff supported residents to move outside, they rarely remained in the garden to support individual or group participation. Lack of time due to basic routines was reported to be the main constraint. In addition, a focus group, comprising team leaders, care workers and activity coordinators was conducted in each LTCFs and confirmed that staff reasoning about supporting outdoor use was characterized by risk aversion, which was partly a consequence of organizational and building design constraints.

Risk averse and negative attitudes about the influence and impact of less than optimal weather or cooler outdoor temperatures on residents were widespread and resulted in outdoor opportunities being restricted to periods of sunshine and warm temperatures. Overall, it was concluded that many







EMRAN: Art, music and open spaces for LTCIs

UK residents are being denied year-round opportunities to use gardens and outdoor spaces as an unintended consequence of the prevailing social structures in the LTC context.

There were some strong parallels with a study conducted in 17 LTCFs in England and Wales by landscape gardeners [29]. They found out, that the LTCF culture was significantly more influential for outdoor engagement than the visual appeal and design of the gardens. They asserted that the single most important factor in shaping residents having a meaningful interaction in the garden was the person with them. It was suggested that in the LTCF with a relationship-centered care ethos, outdoor engagement was perceived as part of everyone's role. This was reported to be far more contingent upon organizational mindset and culture than financial resources and staffing.

DISCUSSION

This paper reported selected interventions using arts, music, and open spaces for enriching LTCFs. One intervention focused on professional photo exhibition, in which residents were the models aiming to initiate discussion amongst carers, family, and members of the public about the experiences and previous roles in society of the residents as well as an enjoyable and fun experience for the participants. The second example used the Brazilian tradition for cooking, the agriculture background in sugar and coffee as well as a music experience for linking these senses in order to enable participation of residents independent of their cognitive status. The third example is aimed at UK residents and their use of outdoor space in LTCFs.

Focusing on the professional photo exhibition, there are several other international projects that used professional photography in LTCFs. As an example the "Moments in Moonah" project, aimed to understanding of the role of photography and other artefacts in the lives of older people who have transitioned into aged care, and to show that photographs can help residents wellbeing during and after the move into LTCFs [30]. Another project used the participatory visual method of photo voice, to explore the everyday experience of the residents and to understand what is central to them. Three main themes emerged in this study: friendships, leisure activities, excursions, and the beauty in the local natural environment. Last but not least another project in Austria was "Working artistically with very elderly people" between 2005 and 2017 [31]. One main strength of this project is that it is feasible, without large scale funding. So improving the wellbeing of residents through photography and the engagement in such projects should be facilitated.

However, we have to mention, that our Austrian example in this paper was practice based and therefore not scientifically evaluated. This is in line with other authors that state that evidence base for the arts and dementia is limited and art intervention studies are often small and lacking robust methodology [32].

The second example in this paper used cooking, smell, taste and music as interventions for enriching LTCFs. Within the framework of art interventions [32,33], e.g. cooking is incorporated in the







EMRAN: Art, music and open spaces for LTCIs

complementary art dimension and music can be incorporated into the art form. Cooking as an art intervention, might be a relatively new concept. However, in 2003 a clinical trial investigated the effect of a recreational therapy cooking program for older adults with dementia and disturbing behaviors [34]. This trial resulted in a significant improvement in levels of both apathy and agitation [34].

The example of using outdoor space from UK, shows several drawbacks, when using outdoor space in UK. This is interesting, as Brazilian colleagues, explained, that outdoor space as one important area for residents in LTCFs. This might be explained, by climate differences between Brazil and UK. As the influence and impact of less than optimal weather or cooler outdoor temperatures on residents were one major aspect, why outdoor space was seldom used in UK.

On the other side one major aspect in UK, why outdoor space was not used, was that the majority of the residents were needed supervision/assistance to access the garden space and with outside mobility. This is interesting, as the authors of this papers also visited Brazilian LTCFs, in which the outdoor space, was highly frequented even though the majority of the streets were not wheelchair friendly or even freely accessible for residents with mobility limitations. Another point that have to be discussed, is that no garden-specific activities, such as lawn-mowing, sweeping leaves, gardening, were observed in the UK example. This is despite the propensity that many older generations may have previously accessed their own gardens and enjoyed the opportunity for fresh air enjoyment of their own garden space.

This is in contrast to the Austrian experience, were gardening or sweeping leaves in LTCFs is voluntarily done by residents. For example, one resident is responsible for taking care of the care home flowers and another may be responsible for the garden produce such as harvesting and tending to the tomatoes or even feeding any chickens who may also live at the care home. This is an everyday task regardless of the resident's cognitive impairment as a way to encourage interaction and some routine into resident's days.

CONCLUSIONS AND RECOMMENDATIONS

Whilst there is much work to do to increase the knowledge and thinking about using arts, music and improved access to open spaces within LTCFs there is some cause for celebration. Social media and practice-focused newsletters and publications reveal an increasing number of garden-focused projects being implemented directly by LTC organizations in the UK and health and social care practitioners are well-placed to support these endeavors. In our group discussion we were keen to explore initiatives that were organically developed within the LTCF setting.

What our discussion highlighted is that within an Austrian as well as Brazilian context such approaches are often not reported in the academic literature mainly due to these often been







EMRAN: Art, music and open spaces for LTCIs

integrated into everyday activities for residents regardless of funding constraints. Indeed it was highlighted that an understanding and mapping of any research activities performed within Brazilian LTCFs would be helpful to help to understand research gaps and future priority areas [35].

There was evidence of a cultural difference between Brazil and a European approach whereby arts, music and the wider use of open space may be witnessed within LTCFs. Larger scale resourcing for any activities is not evident in any of the countries we discussed despite the known advantages for resident's wellbeing. We agreed that exploring these dimensions within our different LTCF settings was enlightening and moving forward there was opportunities for mutual sharing of activities stemming from an arts-based approach that could engage residents. In terms of increasing the priority of art, music and outdoor engagement in LTCFs, there are lessons to be learned from our international colleagues where art, music and outdoor interventions are utilized more frequently and are much more common place and a feature within the daily living for residents [36].

These international and multidisciplinary examples should stimulate LTC researchers, managers as well as other staff to think more broadly about incorporating arts, music and improved use of outdoor space into daily LTC practice.

Other suggested reading and further information:

Austrian public exhibition: Available from https://www.fotoladenlola.at/fotoshooting-galerie/bezirkspflegeheim-weiz/, accessed: 21.07.2020

Chalfont G, Walker A. Dementia Green Care handbook of Therapeutic Design and Practice. 1 ed.

http://www.chalfontdesign.com/media/Dementia Green Care Handbook.pdf: Safehouse Books; 2013.

Carroll D, Rendell M. Promoting the optimal use of outdoorspace. The care home environment. 2016;1(2):27-31. Available from: http://www.stepchange-







EMRAN: Art, music and open spaces for LTCIs

design.co.uk/wp-content/uploads/2016/12/SCD-Article-Care-Home-Environment-Vol-1-Iss-2-Nov-16.pdf, accessed: 21.07.2020

Corrêa, L., Caparrol, A. J. d., Martins, G., Pavarini, S. C. L., & Gratão, A. C. M. (2020). Effects of music on body and facial expressions and psychological and behavioral symptoms of older adults. Cadernos Brasileiros de Terapia Ocupacional, 28(2), 539-553. https://doi.org/10.4322/2526-8910.ctoao1889.

Potter R, Sheehan B, Cain R, Griffin J, Jennings PA. The Impact of the Physical Environment on Depressive Symptoms of Older Residents Living in Care Homes: A Mixed Methods Study. Gerontologist. 2018;58(3):438-47. doi:10.1093/geront/gnx041.

van den Berg MEL, Winsall M, Dyer SM, Breen F, Gresham M, Crotty M. Understanding the Barriers and Enablers to Using Outdoor Spaces in Nursing Homes: A Systematic Review. Gerontologist. 2020;60(4):e254-e69. doi:10.1093/geront/gnz055

Whear R, Coon JT, Bethel A, Abbott R, Stein K, Garside R. 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. 2014;15(10):697-705. doi: 10.1016/j.jamda.2014.05.013.

Funding: The LOTUS Initiative (Improving care in Long Term Care Institutions in Brazil and Europe through Collaboration and Research) was financed through the Global Challenges Research Fund (GCRF).

Conflicts of Interest

The authors declare no conflict of interest.

REFERENCES

- World Health Organization. Ageing and Health Key Facts: World Health Organization;
 2018. Available from: http://www. who. int/news-room/fact-sheets/detail/ageing-and-health, accessed: 21.07.2020.
- Prince MJ. World Alzheimer Report 2015: the global impact of dementia: an analysis of prevalence, incidence, cost and trends: Alzheimer's Disease International;
 2015.Available from: https://www.alz.co.uk/research/world-report-2015, accessed: 21.07.2020.
- 3. Sanford AM, Orrell M, Tolson D, Abbatecola AM, Arai H, Bauer JM, et al. An international definition for "nursing home". Journal of the American Medical Directors Association. 2015;16(3):181-4._doi: 10.1016/j.jamda.2014.12.013.







- 4. Competition and Markets Authority. Care Homes Market Study. London: Competition and Markets Authority; 2017. Available from: https://www.gov.uk/cma-cases/care-homes-market-study#final-report, accessed: 21.07.2020.
- 5. Gordon AL, Franklin M, Bradshaw L, Logan P, Elliott R, Gladman JR. Health status of UK care home residents: a cohort study. Age and ageing. 2014;43(1):97-103._doi: 10.1093/ageing/aft077.
- Schmidt AE, Leichsenring K, Staflinger H, Litwin C, Bauer A. The impact of COVID19 on users and providers of long-term care services in Austria. Country report in LTCcovid. org, Vienna: International Long-Term Care Policy Network; 2020.
- 7. FN-ILPI. National front to strengthen the long-term care institutions for the elderly FN-ILPI, an urgent action!. Brasilia: FN-ILPI; 2020.Available from: http://ilcbrazil.org/portugues/wp-content/uploads/sites/4/2020/04/Relatório-final-pt_br-en-C-1.pdf, accessed: 21.07.2020
- Albuquerque MCdS, Nascimento LOd, Lyra ST, Trezza MCSF, Brêda MZ. The effects of music on aged Alzheimer patients in a long-term care facility. Refista Eletrônica de Enfermagem. 2012;14(2):404-13. dx.doi.org/10.5216/ree.v14i2.12532.
- Harmer BJ, Orrell M. What is meaningful activity for people with dementia living in care homes? A comparison of the views of older people with dementia, staff and family carers. Aging & Mental Health. 2008;12(5):548-58.
 doi.org/10.1080/13607860802343019
- 10. Broome E, Jones B, Dening T, Schneider J, Tischler V. Bringing arts interventions into care settings. The Journal of Dementia Care. 2017;25(6):4.
- 11. Cuddy LL, Sikka R, Vanstone A. Preservation of musical memory and engagement in healthy aging and Alzheimer's disease. Annals of the New York Academy of Sciences. 2015;1337(1):223-31._doi: 10.1111/nyas.12617.
- 12. Broome E, Dening T, Schneider J, Brooker D. Care staff and the creative arts: exploring the context of involving care personnel in arts interventions. International Psychogeriatrics. 2017;29(12):1979-91._doi: 10.1017/S1041610217001478.
- 13. Särkämo T, Tervaniemi M, Laitinen S, Numminen A, Kurki M, Johnson JK, et al. Cognitive, emotional, and social benefits of regular musical activities in early dementia: randomized controlled study. Gerontologist. 2014;54(4):634-50._doi: 10.1093/geront/gnt100.





University of Nottingham

UK | CHINA | MALAYSIA

ISSN: 2059-3341

- 14. Corrêa, L., Caparrol, A. J. d., Martins, G., Pavarini, S. C. L., & Gratão, A. C. M. (2020). Effects of music on body and facial expressions and psychological and behavioral symptoms of older adults. Cadernos Brasileiros de Terapia Ocupacional, 28(2), 539-553. https://doi.org/doi.org/10.4322/2526-8910.ctoao1889.
- 15. Bestetti M. Ambiência: espaço físico e comportamento. Revista Brasileira de Geriatria e Gerontologia. 2014;17(3):41. doi.org/10.1590/1809-9823.2014.13083.
- 16. Tesch-Roemer C, Wahl HW. Toward a More Comprehensive Concept of Successful Aging: Disability and Care Needs. The Journals of Gerontology Series B. 2017;72(2):310-8. doi.org/10.1093/geronb/qbw162.
- 17. Burzynska AZ, Malinin L. Enriched Environments for Healthy Aging: Qualities of Seniors Housing Designs Promoting Brain and Cognitive Health. Seniors Housing & Care Journal. 2017;25(1):23.
- 18. National Collaborating Centre for Mental Health. Dementia: A NICE-SCIE guideline on supporting people with dementia and their carers in health and social care. Leicester: British Psychological Society and Gaskell; 2007. Report No.: 1854334514. Available from: https://www.ncbi.nlm.nih.gov/books/NBK55459/, accessed: 21.07.2020.
- 19. Argyle E, Dening T, Bartlett P. Space, the final frontier: outdoor access for people living with dementia. Aging & Mental Health. 2017;21(10):1005-6. doi.org/10.1080/13607863.2016.1222351.
- 20. Ulrich RS. Effects of gardens on health outcomes: Theory and research. In: Marcus CC, Barnes M, editors. Healing gardens: Therapeutic benefits and design recommendations New York: Wiley; 1999. p. 27-86.
- 21. Brawley EC. Designing Successful Gardens and Outdoor Spaces for Individuals with Alzheimer's Disease. Journal of Housing For the Elderly. 2007;21(3-4):265-83. doi.org/10.1300/J081v21n03 14.
- 22. Chalfont G. Design for nature in dementia care. London: Jessica Kingsley Publishers; 2007. doi.org/10.1300/J081v21n03 14.
- 23. Alessi CA, Martin JL, Webber AP, Kim EC, Harker JO, Josephson KR. Randomized, controlled trial of a nonpharmacological intervention to improve abnormal sleep/wake patterns in nursing home residents. Journal of the American Geriatrics Society. 2005;53(5):803-10._doi: 10.1111/j.1532-5415.2005.53251.x.
- 24. Sambrook PN, Cameron ID, Chen JS, Cumming RG, Durvasula S, Herrmann M, et al. Does increased sunlight exposure work as a strategy to improve vitamin D status in







- the elderly: a cluster randomised controlled trial. Osteoporosis International. 2012;23(2):615-24. doi: 10.1007/s00198-011-1590-5.
- 25. Jacinto AF, Achterberg W, Boas PJFV, Dening T, Harrison-Dening K, Devi R, et al. Using international collaborations to shape research and development into care homes in Brazil: a white paper. Journal of the American Medical Directors Association (2020) submitted.
- 26. Verbeek H, Zwakhalen SMG, Schols JMGA, Kempen GIJM, Hamers JPH. The Living Lab in Ageing and Long-Term Care: A Sustainable Model for Translational Research Improving Quality of Life, Quality of Care and Quality of Work. The Journal of Nutrition, Health & Aging. 2020;24(1):43-7. doi: 10.1007/s12603-019-1288-5.
- 27. Araujo S. Idosos "À Roda dos Objetos" de quatro museus. In: Amaral L, Tojo J, Rede de Redes diálogos e perspectivas das redes de educadores de museus no Brasil. São Paulo 2018. Available from: https://www.sisemsp.org.br/redederedes, accessed 21.07.2020.
- 28. King A. Rehabilitation for Outdoor Activities and Mobility in Care Homes: The ROAM Study 2017. Available from: https://www.hra.nhs.uk/planning-and-improving-research/application-summaries/research-summaries/rehabilitation-for-outdoor-activities-and-mobility-in-care-homes/, accessed 21.07.2020.
- 29. Rendell M. and Carroll D. Why don't we go into the garden?. Journal of Dementia Care. 2015;23(2):16-8.
- 30. DPS Publishing Pty Ltd. Partnership proves the power of photography; 2018.

 Available from: https://www.agedcareguide.com.au/talking-aged-care/partnership-proves-the-power-of-photography; accessed: 21.07.2020.
- 31. UNIT. Working artistically with very elderly people; 2016. Available from: https://www.kunstlabor-graz.at/jart/prj3/unit/data/uploads/dokumente/hochbetagte_01-2018_engl_web_2018-03-16_1003346.pdf, accessed: 21.07.2020.
- 32. Cousins E, Tischler V, Garabedian C, Dening T. Principles and features to define and describe arts interventions for people with dementia: a qualitative realist study. Arts & Health. 2018:1-17. doi.org/10.1080/17533015.2018.1490787
- 33. Cousins E, Tischler V, Garabedian C, Dening T. A Taxonomy of Arts Interventions for People With Dementia. Gerontologist. 2020; 60(1):124-134. doi: 10.1093/geront/gnz024.







34. Fitzsimmons S, Buettner LL. A therapeutic cooking program for older adults with dementia: Effects on agitation and apathy. Journal of American Journal of Recreation Therapy. 2003;2(4):23-33.Available from:

https://libres.uncg.edu/ir/uncg/f/L Buettner Therapeutic 2003.pdf, accessed 21.07.2020.

- 35. Wachholz P, Ricci NA, Hinsliff-Smith K, Devi R, Shepherd V, Boas PJ, et al. Research on long-term care homes for older people in Brazil: protocol for a scoping review.

 Journal of the East Midlands Research into Ageing Network. 2019;32:1-16.
- 35. McLean J, Woodhouse A, Goldie I, Chylarova E, Williamson T. An evidence review of the impact of participatory arts on older people. Mental Health Foundation; 2011. Available from: https://www.mentalhealth.org.uk/publications/evidence-review-impact-participatory-arts-older-people, accessed 21.07.2020.