

Music for all ages: music and memory

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Introduction

Currently, and especially in the Western world, life expectancy has grown considerably. We live longer but not better. Against this precarious quality of life, musical practice is undoubtedly a good alternative not only for improving physical and mental health, but also for social and personal skills. However, it is necessary to review how music acts on people and at all ages, putting value on music education professionals and rigor in music education. In this sense, only those people who are specialists and specialized in each of the branches, itineraries and options that we find today in the wide field of music should teach, educate and train in music.

According to the United Nations,¹ the world population will increase by 2 billion people by 2050. The world is aging due to increased life expectancy and lower birth rates. On the other hand, the global fertility rate is expected to decrease reaching 2.2 births per woman in 2050. Globally, life expectancy at birth, which increased from 64.2 years in 1990 to 72.6 years in 2019, increase further, reaching 77.1 years in 2050.

The fact that a high percentage of the Spanish population is older creates a new situation in which a redistribution of resources is carried out by developing a wide variety of initiatives aimed at improving the lives of older people now and in the future.² In the context of social, health and educational services, the concept of quality of life has been acquiring significant importance as research. The actions carried out in the last decades have made it possible to develop both the concept of quality of life and the field of action. Today, quality of life is a common goal for service users, professionals, organizations or politicians.³ In this sense, the concern for the quality of life makes the World Health Organization (1992) understand it as the perception that a person has of himself, in his own cultural context and of the system of values relating- them with their goals, their expectations, their norms and concerns. It should be borne in mind that the quality of life emerges when the subject has his basic needs covered and that in the case of the elderly, the collaboration of the family and society in general is essential.

In the study carried out by Ramos-Esquivel et al.,⁴ come to the conclusion that quality of life can interact with old age by sharing concepts and meanings, there being a link to the age that people live as well as socially shared elements, such as the absence of work or physical autonomy, causing negative feelings to these absences.

In our opinion, a relationship could be established between quality of life and dementia as a consequence of age, as pointed out by Prieto et al.,⁵ stating that dementia grows exponentially with age, so it is possible that in a few years this disease will become a global epidemic, which according to statistics, is the main cause of disability in adults old, so, in general terms, the prevalence of dementia is below 2% in people aged 65 to 69; this value doubles every 5 years, standing between 10-17% in people aged 80 to 84, and that in people over 90 it reaches 30%. One of the most common dementias and which implies a decrease in the person's cognitive function or in their mental capacity to think, reason, remember and carry out independently everyday tasks that they used to carry out, is Alzheimer's Disease (

EA). According to the World Health Organization, this disease, taking into account its devastating effects on the people who suffer from it, families, communities and national health systems, we can say that it manifests itself as a public health crisis.⁶

The evolution of age leads to the loss of abilities and, in some cases, dementia. For López- Pousa dementia is a syndrome that is acquired due to an organic cause that is capable of causing a permanent deterioration of higher mental functions and that leads to a functional incapacity both at a social and work level, in people that do not suffer alterations in the level of consciousness. It is true that, at a general level, society is becoming aware of the situation helped by the scientific community, which is becoming more and more aware of this problem.

As explained by De la Rubia et al.⁷ Alzheimer's disease is one of the diseases that most worries our society, treatments help, but now other therapies are being sought to improve the indicators of this disease, such as music. These authors conducted a study on the benefits of music through a questionnaire that measured stress-related depression and anxiety and well-being-related happiness before and after music therapy sessions, obtaining significant improvements in patients.

E. Jaques Dalcroze, Swiss pedagogue and composer, opposed the mechanical learning of music. Through body movement, he worked on the education of the ear and the perceptive development of rhythm. According to Silvia Del Bianco⁸ this method is multidisciplinary, relating music and body movement. Musical solfege in space makes it possible to visualize the different musical notions. Learning is done in groups, working on adaptation, imitation, reaction, integration and socialization skills. Active auditory education is also acquired with the help of movement, becoming aware of the body and learning to improvise bodily and musically.

For Dalcroze⁹ music was the best way to reconcile mind, body, spirit and emotion. This Swiss pedagogue, professor of harmony at the Geneva Conservatory, observed that the weak point of his students was the rhythm, the lack of relationship between the ear, emotions and the body, which is why his methodology was organized in three parts: rhythmic gymnastics, which uses body movement to study rhythm, solfege and the study of tonal relationships, and improvisation. In this sense, Dalcroze found that training the fingers, eyes and ears, as it was necessary for the whole organism to participate. His work, as Boyarsky⁹ says, had an important impact on musicians, composers,

dancers, choreographers, actors, leaving many practical examples. Currently, teachers trained in Dalcroze's pedagogy are instructed in movement, harmony, solfège, improvisation, piano, and in his pedagogy.

As Alperson¹⁰ says, Dalcroze already highlighted the innate relationship between music and the body, pointing out that any musical concept can be learned from gesture or movement, also convinced of the alliance between hearing and body movement, so it is not surprising how significant a method arouses the interest of researchers to know the effects of Dalcroze's method also in adult students.

There are studies that show the benefits of music, for example, Hars et al.,¹¹ to address their research, starting from the fact that music is beneficial for multitasking training, affecting both cognitive functioning and mood. In their research they have older adults from the age of 65. The conclusion they reached after six months of intervention, one hour per week, was that the use of music from the Dalcroze methodology improved cognitive function and decreased anxiety compared to control groups.

In the study conducted by Trombetti et al.,¹² it was possible to observe how falls in the elderly could be reduced through music, specifically using the Dalcroze methodology, the foundation of which is body movement as a musical expression. This study was conducted over 12 months with 134 randomly chosen participants over 65 years of age at risk of falls. Some were assigned to a control group and others to the intervention group. At six months, a reduction in falls could be observed in the intervention group.

Music can have a therapeutic value in Alzheimer's patients according to Lord and Garner,¹³ who worked with three groups of people affected by this disease; the subjects who participated in a Big Band, performing music from the 20s and 30s, showed a greater ability to remember facts from their personal past, compared to the other two groups (one who practiced drawing and painting and another who did puzzles); moreover, the first group showed to be happier.

Globally, people aged 65 and over outnumbered children under the age of five, meaning there is an aging population. These data from the United Nations Organization¹⁴ do not detail that the population, which is getting older, is not living better, as the World Health Organization points out.¹⁵ It should be added that diseases such as dementia, stroke, or Parkinson's are increasing exponentially, and there is still no cure, so in many cases alternative therapies such as art are resorted to. These therapies are non-invasive and inexpensive. On the other hand, the technological gap in the elderly becomes more evident in times of difficulty such as Covid-19, where isolation and loneliness are serious consequences.

Other research such as Hsin's Chu, Chyn-Yng Yu Lin, Keng-Liang Ou, Tso-Ying Lee, Anthony, Kuei -Ru,¹⁶ Huei-chuan, Wen-li, Tzai-li, and Watson,¹⁷ Raglio, Attardo, Gontero, Rollino, Groppo and Granieri,¹⁸ Kemper, KJ and Danhauer,¹⁹ reinforce the idea that music can reduce anxiety, improve quality of life, relieve stress and even facilitate social integration. This work collects the opinions, actions and attitudes of a group of elderly people who have had to see their musical activities interrupted due to the necessary confinement. These people enjoyed participating in a musical group (vocal and instrumental ensemble, using the voice, some musical instruments such as the guitar, harmonica, accordion, bandúria and small percussion, where movement and body expression are also included), improving quality of life, memory and physical activity.

Music, beyond entertainment, can be very beneficial for the elderly. In Hsin's research Chu, Chyn-Yng Yang, Yu Lin, Keng-Liang Ou, Tso-Ying Lee, O'Brien and Kuei -Ru Chou¹⁶ show that the action of music can be a non-invasive and inexpensive therapy to reduce depression in the elderly, in more than delaying the deterioration of cognitive functions, especially short-term memory. In this line, the work of Huei-chuan, Wen-li, Tzai-li, and Watson,¹⁷ states that one of the most important goals of therapeutic interventions in the care of dementia is the reduction and prevention of 'anxiety and the agitated behaviors of people with dementia.

Group music intervention using percussion instruments with familiar music may be an effective and cost-effective approach to reducing anxiety and agitated behaviors in people with dementia. On the other hand, the musical intervention improves the psychological well-being of people with dementia.

Raglio, Attardo, Gontero, Rollino, Groppo and Granieri,¹⁸ used music to reduce psychological and behavioral disturbances related to neurological disorders and improve functional recovery. In this work, these authors emphasize that through music you can identify aspects related to mood, reducing depression and anxiety, as well as improving emotional expression, communication and interpersonal skills, the self-esteem or quality of life.¹⁹

In the research of Clair and Memmott,²⁰ it is highlighted how music can help reduce the symptoms of depression, insomnia, anxiety and agitation; handle problem behaviors; provide physical and emotional stimulation; helps rehabilitate people with heart disease, Parkinson's disease, and stroke-related disabilities; help with pain management; facilitate social integration; communication; and the expression of feelings, including anger and pain; and relieve the stress and strain associated with caring for older adults. Following this line, Kemper and Danhauer¹⁹ concluded that music is widely used to improve well-being, reduce stress and distract patients from unpleasant symptoms, exerting direct physiological effects through the nervous system self-employed. In addition, music significantly reduces anxiety, representing an economic tool also for improving the quality of life in people with palliative care.

The subjective well-being of adults can also be modified by music, as in the study carried out by Jenkins, where music, among other arts, was relevant for the improvement of well-being in people aged 50 or more.

Patients with Alzheimer's were compared in the study conducted by Palisson et al.,²¹ discovering that sung texts were remembered better, both long and short term, concluding that music facilitates learning and retention, putting in value the power of music as a mnemonic technique. Trombetti, Hars, Herrmann, Kressig, Ferrari and Rizzoli,¹² did a study, using the musical pedagogical methodology of Dalcroze, it was a randomized controlled trial, for 6 months, with the hypothesis that the rhythmic marching exercises used in Dalcroze, could reduce falls in the participants, who were older people. In the study by Mammarella, Fairfield and Cornoldi, the power of listening to music is manifested, specifically on music by Vivaldi and the improvement of cognitive performance of older adults, especially in two memory tasks of work, compared to others who did not use music.

As already noted, there are different authors who highlight, among other elements, technology as an important resource for the elderly. In this sense, technology also facilitates access to active participation in art and culture, and these factors are relevant to quality of life. Given the importance, research is also aimed at finding out the impact of digital literacy on the elderly, in order to know the training needs.

On the other hand and as stated by other authors,²² the benefits of music are amply demonstrated in the elderly, so in the face of the Covid-19 situation, it can be considered a double problem, on the one hand the lack of access, training and capabilities of the elderly in terms of access and mastery of digital technologies, and on the other hand, the loneliness they face, renouncing not only family contact but also daily routines such as access to art, culture and especially to those activities that bring them direct benefits such as music.

Music and sustainable development goals (17 SDGs)

Art and culture go beyond entertainment, to transform societies and impact both socio-political and economic issues, acquiring a commitment and responsibility with the Sustainable Development Goals (SDGs). These SDGs, born from the 2030 Agenda of the United Nations, have among their objectives cultural rights, heritage, diversity and creativity as a basis for human and sustainable development.

Health policies and programs must go hand in hand to improve well-being. Of course, education is fundamental, and its access, trying to eliminate any type of exclusion. Culture and heritage are also linked to gender, therefore, there must be equal representation and empower girls and women safeguarding and promoting culture are two ends in themselves and, at the same time, other means to contribute directly to the achievement of many SDGs: achieving safe and sustainable cities, promoting economic growth and decent work, reducing inequality, stopping environmental degradation, achieving gender equality and promoting peaceful and inclusive societies.

In the reference book on education for sustainable development, prepared by UNESCO (2012), the three areas of sustainability are highlighted: environment, society and economy, in addition to highlighting the role of culture. If we group the SDGs around the three fundamental pillars of sustainable development – economic, social and environmental – we realize that culture and creativity play a transversal role in all of them. Musical culture, music, musical traditions, have accompanied the human being throughout his life, providing him with many and varied advantages such as communicating, relaxing, enriching his vocabulary, relating between different peoples or cultures, defend themselves, as well as prosper, turning music in some places as elements of progress and sustainability. Festivals and popular traditions, in addition to being elements of sustainability, understanding by sustainability to satisfy current needs without harming future generations, not only thinking about the economic landscape but also about the quality of life and social well-being, which entails on the other hand, avoid any type of social or educational exclusion.²³

Conclusion

Listening to music of any kind strengthens the immune system, as it stimulates the production of antibodies that fight germs and bacteria. In addition, recent studies show that it soothes pain (reference?). Music helps to coordinate breathing and relax the pulse, thus enabling children to relax and learn to control their emotions. In addition, the evocative power of music means that by listening to happy songs, boys and girls improve their mood and feel happier. On the other hand, being able to play or sing a tune or dance a choreography makes them feel confident. Institutional responsibilities must also look towards new challenges and opportunities, but understanding sustainability from the person's point of view. We can find examples where culture and art are part of political agendas, to transform social and educational environments, generate employability and facilitate social and educational inclusion. From our point of view, artistic professional training must attend to

these needs that demand a transformation of the environments, so it is necessary to make a reflection and a review about who is trained? (student profile) how is it formed? (curriculum) what are you training for? (current and future society).

Music has been fundamental in all societies and throughout time. Subjective Well-Being (BES) involves individual assessments of satisfaction with life, considered relevant from the point of view of politics and governments. These authors, in their research, revealed that involvement with music through dancing or attending events increases BES. Among the reflections of these authors, the importance of dance or the physical relationship, body movement, rather than passivity in musical activity, stands out, establishing a relationship with health and quality of life. Another relevant issue is the relationship between the standard of living of the study participants and attendance at musical events.²⁴

On the other hand and with regard to the education of adults, permanent education and training for adults are usually aimed mainly at literacy or complementary training focused on improving work, expanding the curriculum, as well as obtaining of qualifications equivalent to basic education or access to University. Not all adults look for basic training in education, the needs can vary, ranging from covering cultural needs or leisure time, adapting to the characteristics of today's society or learning that "pending subject" that, for family or work reasons they could not develop at the time, to consider a professionalization. Also, life changes such as retirement or job loss mean new paths that may require an increase in self-esteem diminished by these changes.

Finally, it must be concluded that music should be considered fundamental within compulsory education, and its main contributions of a socializing nature, in addition to developing different areas of the brain that contribute to the acquisition of skills and abilities to deal with other subjects or subjects such as mathematics or learning a foreign language and if movement is applied, it will contribute to improving physical aspects that provide a better quality of life.

Musical education can contribute positively to the development of the person, socializing him, since this learning requires group participation in many activities, integrating him into a society through his music and dances, facilitating literacy with their songs, contributing if necessary the memorization and body work with the different rhythms and body expression, providing tools and resources that contribute to an improvement in the quality of life not only in the cognitive field, but also to the affective and social.

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Conflicts of interest

The authors declare they have no conflicts of interest that are directly or indirectly related to the research.

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