Therapeutic Music Research Abstracts – Gerontology

The meaning of music in the lives of older people: a qualitative study
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Psychology of Music, Vol. 33, No. 4, 437-451 (2005)
DOI: 10.1177/0305735605056160
This qualitative study describes the experience of music and focuses on the emotional, social, intellectual and spiritual well-being roles that music plays in the lives of older people. In-depth interviews were used to explore the meaning, importance and function of music for 52 older Australians living in the community aged 60 years and older. The findings revealed that music provides people with ways of understanding and developing their self-identity; connecting with others; maintaining well-being; and experiencing and expressing spirituality. The results show how music contributes to positive ageing by providing ways for people to maintain positive self-esteem, feel competent, independent, and avoid feelings of isolation or loneliness. The study highlights the need to be better informed about how music can facilitate and sustain older people's well-being.

The therapeutic use of music in a care of the elderly setting: a literature review.
Kneafsey R. Department of Nursing Studies, University of Edinburgh.
J Clin Nurs. 1997 Sep;6(5):341-6.
This paper reviews recent literature concerning the use of music and music therapy in health care. Focusing particularly on the elderly, the use of music in relation to patients with dementia and Parkinsonism is examined. Brief reference is also made to the use of music in pain control. Although in this case, literature is not specific to care of the elderly settings, the results are still relevant to gerontological nursing. Projects which achieved positive results in controlling pain perception could be transferable to a care of the elderly scenario, where chronic pain is often part of daily life.
PMID: 9355467 [PubMed - indexed for MEDLINE]

A trio to treasure: the elderly, the nurse, and music.
Geriatr Nurs 2001 Jul-Aug;22(4):191-5; quiz 196-7 (ISSN: 0197-4572) Kramer MK
University of Utah, College of Nursing, Salt Lake City, USA. Music is a powerful tool for maintaining and restoring health and is particularly suited to elder care. Music can be used to induce relaxation, alter moods, and create distraction. Music's effect is attributed to its vibrational properties, which are processed through the senses and integrated within the central nervous system. Nurses have a major responsibility to understand, appreciate, and use music in their practice.

Music therapy increases serum melatonin levels in patients with Alzheimer's disease.
Altern Ther Health Med 1999 Nov;5(6):49-57, Kumar AM; Tims F; Cruess DG; Mintzer MJ; Ironson G; Loewenstein D; Cattan R; Fernandez JB; Eisdorfer C; Kumar M
ABSTRACT: CONTEXT: Music therapy is known to have healing and relaxing effects. Although these effects appear to be mediated by release of neurotransmitters and neurohormones, the specific neurohormonal systems
involved have not been fully investigated. OBJECTIVE: To assess the effects of a music therapy intervention on concentrations of melatonin, norepinephrine, epinephrine, serotonin, and prolactin in the blood of a group of patients with Alzheimer's disease. DESIGN: Blood samples were obtained before initiating the therapy, immediately at the end of 4 weeks of music therapy sessions, and at 6 weeks follow-up after cessation of the sessions. SETTING: Miami Veterans Administration Medical Center, Miami, Fla. PATIENTS: 20 male inpatients with Alzheimer's

disease. INTERVENTION: 30- to 40-minute morning sessions of music therapy 5 times per week for 4 weeks. MAIN OUTCOME MEASURES: Changes in melatonin, norepinephrine, epinephrine, serotonin, and prolactin following music therapy. RESULTS: Melatonin concentration in serum increased significantly after music therapy and was found to increase further at 6 weeks follow-up. A significant increase was found between baseline values and data recorded after the music therapy sessions as well as at 6 weeks follow-up. Norepinephrine and epinephrine levels increased significantly after 4 weeks of music therapy, but returned to pretherapy levels at 6 weeks follow-up. Serum concentration of prolactin and platelet serotonin levels remained unchanged after 4 weeks of music therapy and at 6 weeks follow-up. CONCLUSION: Increased levels of melatonin following music therapy may have contributed to patients' relaxed and calm mood.

Use of music to decrease aggressive behaviors in people with dementia.
AUTHORS: Clark ME; Lipe AW; Bilbrey M
AUTHOR AFFILIATION: Tennessee Technological University, Cookeville, USA.
SOURCE: J Gerontol Nurs 1998 Jul;24(7):10-7
CITATION IDS: PMID: 9801526 UI: 99018334
ABSTRACT: The purpose of this study was to examine the effects of recorded, preferred music in decreasing occurrences of aggressive behavior among individuals with Alzheimer's type dementia during bathing episodes. Eighteen older adults, age 55 to 95, with severe levels of cognitive impairment, participated in the study. They were randomly scheduled for observation during bath time under either a control (no music) condition or an experimental condition in which recorded selections of preferred music were played via audiotape recorder during the bathing episode. Following a 2-week (10 episode)
observation period, conditions were reversed. A total of 20 observations were recorded for each individual. Results indicated that during the music condition, decreases occurred in 12 of 15 identified aggressive behaviors. Decreases were significant ($p < 0.05$) for the total number of observed behaviors and for hitting behaviors. During the music condition, caregivers frequently reported improved affect and a general increase in cooperation with the bathing task. The implications of these findings for improving the overall quality of care for severely cognitively impaired older adults are
discussed.

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A Key for Unlocking Memories
Music Therapy Opens a Path to the Past for Alzheimer's Patients-Creating a Personal Playlist
By MELINDA BECK
Wall Street Journal

Music Triggering Memories in Dementia Patients
With the help of some old familiar tunes, advanced-dementia patients at Beth Abraham Family of Health Services in New York are reconnecting with their memories and with each other in ways that may seem surprising for those with degenerative brain diseases.
But with stroke and dementia patients, iPods and other MP3 players are having just the opposite effect.

Listening to rap and reggae on a borrowed iPod every day has helped Everett Dixon, a 28-year-old stroke victim at Beth Abraham Health Services in Bronx, N.Y., learn to walk and use his hands again.

Trevor Gibbons, 52, who fell out of a fourth-floor construction site and suffered a crushed larynx, has become so entranced with music that he's written 400 songs and cut four CDs.

Ann Povodator, an 85-year-old Alzheimer's patient in Boynton Beach, Fla., listens to her beloved opera and Yiddish songs every day on an iPod with her home health aide or her daughter when she comes to visit. "We listen for at least a half-hour, and we talk afterwards," says her daughter, Marilyn Povodator. "It seems to touch something deep within her." Edel Rodriguez

Caregivers have observed for decades that Alzheimer's patients can still remember and sing songs long after they've stopped recognizing names and faces. Many hospitals and nursing homes use music as recreation, since it brings patients pleasure. But beyond the entertainment value, there's growing evidence that listening to music can also help stimulate seemingly lost memories and even help restore some cognitive function.

"What I believe is happening is that by engaging very basic mechanisms of emotions and listening, music is stimulating dormant areas of the brain that haven't been accessible due to degenerative disease," says Concetta Tomaino, executive director of the Institute for Music and Neurologic Function, a nonprofit organization founded at Beth Abraham in 1995.

Dr. Tomaino, who has studied the therapeutic effects of music for more than 30 years, is spearheading a new program to provide iPods loaded with customized playlists to help spread the benefits of music therapy to Alzheimer's patients even at home. "If someone loved opera or classical or jazz or religious music, or if they sang and danced when the family got together, we can recreate that music and help them relive those experiences," she says.

Music for Memory

Listen to clips of some '60s tunes recommended by the The Institute for Music and Neurologic Function for individuals with Alzheimer's Disease or other memory impairments:

"The Times They Are A-Changin'" by Bob Dylan

"Dawn (Go Away)" by Frankie Valli & The Four Seasons

"Come a Little Bit Closer" by Jay & The Americans

"California Girls" by The Beach Boys

"(I Can't Get No) Satisfaction" by The Rolling Stones

See the full list and get more recommendations from the Institute's Web site.

Dr. Tomaino says she frequently sees dementia patients make gains in cognitive function after music therapy. In one unpublished study she led a few years ago, with funding from the New York State Department of Health, 45 patients with mid- to late-stage dementia had one hour of personalized music therapy, three times a week, for 10 months, and improved their scores on a cognitive-function test by 50% on average. One patient in the study recognized his wife for the first time in months.

David Ramsey, a music therapist and psychologist, holds twice weekly sessions at Beth Abraham, where small groups of patients can sing and dance to familiar songs like "Under the Boardwalk" and "Swing Low, Sweet Chariot." Mr. Ramsey will sometimes stop singing and let residents fill in the blanks on their own. When they do that, he says, "they are exercising their cognitive function—just like they are exercising in physical therapy." And unfamiliar songs quickly become familiar, another sign that even advanced Alzheimer's patients are forming new memories. "One of our therapists played, 'Who Let the Dogs Out?' I know they had never heard that one, but it became an anthem," he says.

View Full Image

Bryan Derballa for The Wall Street Journal

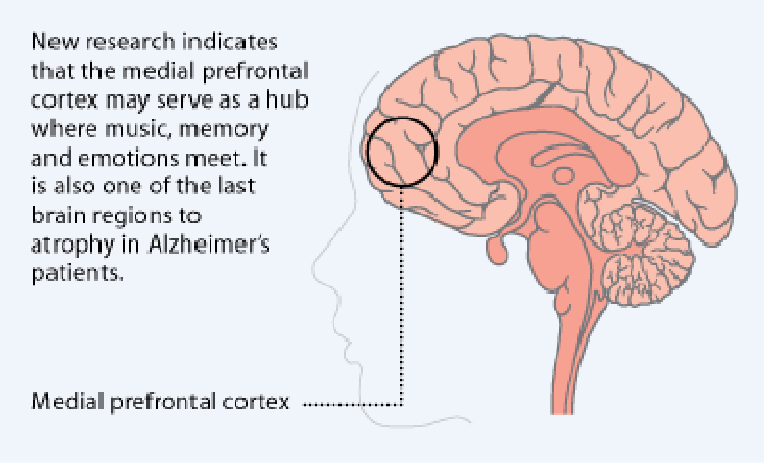
David Ramsey leads music sessions at Beth Abraham Services, meant to stimulate positive memories and physically engage dementia patients.

In addition to benefiting Alzheimer's patients, decades of studies have demonstrated that music can help premature infants gain weight, autistic children communicate, stroke patients regain speech and mobility, dental, surgical and orthopedic patients control chronic pain and psychiatric patients manage anxiety and depression. Now, neuroscientists are starting to identify the underlying brain mechanisms that explain how music connects with the mind and body, and they are starting to work hand in hand with music therapists to develop new therapeutic programs.

There's no single center for music in the mind—the brain appears to be wired throughout for music, since it engages a wide variety of functions, including listening, language and movement. But Petr Janata, a cognitive neuroscientist at the University of California, Davis's Center for Mind and Brain, recently located an area of the brain—the medial prefrontal cortex, just behind the forehead—that seems to serve as a hub for music, memory and emotions.

In a study published online in the journal Cerebral Cortex in February, Dr. Janata had 13 UC Davis students listen to excerpts of 30 songs chosen randomly from "top 100" charts from years when they were 8 to 18 years old, while he recorded their brain activity using functional magnetic resonance imaging, or fMRI. Songs that were unfamiliar evoked reactions in the auditory processing parts of the students' brains; those that elicited emotional reactions stimulated other brain areas. When songs conjured up a specific personal memory, there was particularly strong activity in the medial prefrontal cortex. That's where what Dr. Janata calls "a mental movie" seems to play in the mind's eye, with music serving as its soundtrack.

And, it turns out, this same medial prefrontal cortex had been identified in earlier research as one of the last parts of the brain to atrophy as Alzheimer's disease progresses.



Dr. Janata hopes to study whether the same phenomenon occurs, in the same part of the brain, with older test subjects and eventually with Alzheimer's patients. He says that activating memories with music cannot reverse or cure neurological diseases like dementia. But playing familiar music frequently can significantly improve a patient's mood, alertness and quality of life.

Music therapy isn't used more widely with Alzheimer's and dementia patients largely because of a lack of manpower and money, experts say. There are only about 5,000 certified music therapists in the U.S., and fewer than 20% work with geriatric patients. That's why the Institute for Music and Neurologic Function is trying to bring music therapy into patients' homes. Caregivers or family members can use records or tapes at home, or program their own iPods. The institute provides suggested songs by era and genre on its Web site, www.imnf.org. But those who don't have the time or technical skills can send an iPod to the institute after filling out a questionnaire about the patient's musical tastes, and the institute will program a customized iPod for them. (See the Web site for prices and package information.) The institute is also seeking donations of iPods that are no longer in use to load with music and send to Alzheimer's patients who can't afford their own.

What to Do: Old iPods

Your outdated or unused iPods or MP3 players could bring healing music to an Alzheimer's, stroke or pain patient. Send donations to the Institute for Music and Neurologic Function at 612 Allerton Ave., Bronx, NY, 10467. They must be working and still able to hold a charge.

Dr. Tomaino advises caregivers to listen as long as the patient seems interested. A patient may want to listen alone through headphones or through speakers so that a friend or family member can listen along. "Then they can reminisce together about what the music reminds them of or just hold hands to be more connected," she says. She also suggests involving the whole family in interacting with the music. "The kids can drum along while Grandpa listens to Big Band sounds," she says.

One possible downside: Dr. Tomaino says sometimes a song can evoke unhappy memories, such as the death of a loved one or a relationship gone bad. She recalls a Holocaust survivor at Beth Abraham who became very upset upon hearing a Wagner opera.

"If family members don't know what music would be appropriate, think in generalizations," she says. "If a parent loved to go dancing in their teens, picking the most popular songs from that era tends to be pretty safe." Music from a person's teenage years seems to be especially evocative of memories, for reasons not well understood.

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