Music therapy with aging

HeartBeats to Music Therapy  (1:07)
http://abcnews.go.com/video/playerIndex?id=7901581

Music Therapy and Parkinson’s  (3:27)
http://www.youtube.com/watch?v=9nnLTPPDRXI

Music Therapy with Seniors  (10:00)
http://www.youtube.com/watch?v=-VSLsqe7B8U
Diseases associated with the elderly

- Alzheimer’s disease
- Parkinson’s disease
- Dementia
- Anxiety
- Depression
- Problems focusing
- Speech problems
- Psychological problems
- Arthritis
Why is music important for the Aging?

• At this website:
  
  www.musictherapy.org/faq.html

  It states that music therapy can benefit the elderly with mental health needs, cognitive disabilities, Alzheimer’s disease and other aging related conditions.

• Music therapy is used for many purposes, and the uses of music with individuals with Alzheimer’s disease is one of the most powerful applications of music therapy.
What is Alzheimer’s disease?

- It is a fatal and progressive brain disease that destroys brain cells, causing loss of memory, problems with thinking and language skills, and behavioral changes.

- It is the most common form of dementia, which accounts for 50-70% of dementia cases.

- It is a disease which currently has no cure.
Statistics of Alzheimer’s disease

• People with Alzheimer’s die an average of four to six years after diagnosis.

• Around 5.3 million Americans are living with Alzheimer’s disease.

• Alzheimer’s is the sixth leading cause of death in the United States.

• Every 70 seconds, someone is diagnosed with Alzheimer’s Disease.
The following data show the prevalence of Alzheimer’s disease in the United States from 1900-2050.
Living arrangements:

About 70% of people with Alzheimer’s Disease live at home.

75% of the home care is provided by friends and family members.

Most remain at home until the last and most severe stages of the disease.

The caregiver frequently develops depression, anxiety, and poor health.

Eventually those with Alzheimer’s will need 24 hour care.
Nursing home care:

It is very expensive, ranging from $40,000 - $70,000 a year.

The estimated lifetime cost per patient is $174,000.

The financial cost of AD is enormous, but the emotional and physical costs for the caregiver are far worse.
While there is currently no cure, there are some ways to help Alzheimer’s patients and their caregivers cope with the disease. They are:

- Exercise
- Smiling, singing, or humming
- Music therapy
Exercise

- Exercise is good for health and emotional well-being.
- It is important for them to stay active.
- They should be encouraged to do the things they love, even if they don’t remember, for example, gardening, taking a morning walk, or riding a bicycle.
Smiling, singing, humming

- It’s good to walk into a room smiling, singing or humming.
  
  If the person suddenly forgets who you are, they will feel more comfortable with someone who is smiling or singing.
  
  Individuals with AD often get confused and lost, which could lead to anxiety, so a smile or hearing music tells them you are a friendly person.
  
  It helps them to stay calm.
Music Therapy helps Alzheimer’s patients because it is soothing to them.

Research findings show that playing the patients’ favorite songs can help calm them and enhance their feeling of wellness.
Depending on a patient’s functioning ability, music therapy sessions utilize a variety of musical activities:

Singing, dancing, listening, playing musical instruments, moving to music, or playing games.

**Results show:**

Patients were significantly less agitated during and after sessions than before sessions.

Patients ate more while music was playing.

Irritability, depression, and anxiety decreased.

Music increased the number of hours of restful sleep.

Music increased patients’ smiling, dancing, and clapping to music.
In an article titled *Music And The Mind*, it is stated, “More and more nursing homes and hospitals are finding that working with a music therapist can make a big difference.”

Because music therapy has been shown to help patients with Alzheimer’s Disease, hospitals and nursing homes are using it.
In a movie called *The Notebook*, there was a patient in a nursing home with Alzheimer’s Disease. Her husband was also a patient there, just because he wanted to stay with his sweetheart. She couldn’t remember anything from her past. The nurse told her that she likes to play the piano, so she tried. She was hesitant because she didn’t remember how, but once she got started, she played such beautiful music. She was playing it all by memory.

Alzheimer’s is very devastating for a loved one. However, music is something that can be remembered. Even though she didn’t remember anything else, she could still play beautiful music by memory.
How can music therapy help?

• Music reduces agitation, calms and reduces stress hormones.

• Music improves mood by producing endorphins.

• Music promotes better sleep by increasing melatonin.

• Music helps the amount of intake during meals to increase.

• Music helps cue long term memory.
Who can benefit from music therapy?

- People that can benefit from music therapy are:
  - Patients with Alzheimer’s Disease
  - The caregivers (family/friends, staff)
  - Nurses at nursing homes
  - Doctors
There is still no cure for Alzheimer’s Disease.

Music Therapy can play an important therapeutic role by reducing agitated behavior.

Music Therapy is a creative and effective behavioral intervention for managing disruptive behaviors displayed by Alzheimer’s Disease patients.

Even the most severely demented patients can do musical activities, they just have to be modified or adapted to fit individual personal needs.
Ten warning signs of Alzheimer’s disease

1. Memory loss
2. Difficulty performing familiar tasks
3. Problems with language
4. Disorientation with regard to time and place
5. Poor or decreased judgment
6. Problems with abstract thinking
7. Misplacing things
8. Changes in mood or behavior
9. Changes in personality
10. Loss of initiative
Social isolation and loneliness in the Aging

What is social isolation?
A low level of contact with family, friends, neighbors, community and social sources, which can be caused by geographic, physical, economic, personal and social barriers.

What is loneliness?
An emotional state in which a person experiences a powerful feeling of emptiness and isolation.
- Elderly Health Services
Loneliness and Social Isolation are often associated with older age, and have been identified as risk factors for a number of health (both physical and mental), and related problems.

Examples:

- Depression
- Suicidal thoughts
- Anxiety
- Aggression
- Memory impairment
It is often undiagnosed.

According to Jacqueline Olds, a psychiatrist at the Harvard Medical School, loneliness is often a condition that is overlooked. People just suggest that they are depressed or sad. They are too embarrassed to say that they are lonely, because they are afraid that it is a stigma and that they have no one to confide in. Therefore, people try to isolate themselves at home, to prevent themselves from such embarrassment, and lose contact with the outside world.
Causes of isolation

Health Factors
- Chronic diseases
- Limited mobility
- Diminished cognitive capacity
- Disability

Family Factors
- Death of spouse
- Diminished contact with family members
- Divorce
- Lack of intimate relationships

Personal Factors
- Loss of interest
- Shyness
- Lack social skills
- Increased dependency
- Perception of own health

Environmental Factors
- Moving to a residential home may put them farther away from family and friends.
- Relationships
Manifestations of isolation

• **Appetite and weight changes**
  - Significant loss of weight change, generally more than 5% of body weight within a month

• **Sleep Changes**
  - Insomnia—lack of sleep, or hypersomnia—oversleeping

• **Loss of energy**
  - Feeling fatigued or exhausted

• **Loss of interest in ADL** (activities of daily living)
  - No interest in or ability to find pleasure in former hobbies, or social activities, or past times.
According to the American Music Therapy Association

- “Music therapy is an effective and valid treatment for persons who have psychosocial, affective, cognitive and communicative needs”. (AMTA)

- Music is an extremely powerful tool of expression and creativity. It is used as a helpful element to provide healing, comfort and relaxation to people in certain disease states.

- Music provides a form of relaxation and stimulates the pituitary gland to release neurotransmitters such as endorphins.

- Endorphins create feelings of euphoria and enhancement of the immune response. Therefore, we feel less pain and can also decrease high stress levels, and mediate our emotional responses to pleasant moods.
Methods were sought to prevent or delay the need for long-term care for the elderly.

Scientists sought to find out if a musical exercise intervention would improve the physical, cognitive, behavioral status, and life satisfaction of a population of elderly people.

Residents were selected by screening out people with:

- severe cognitive impairment
- socially disruptive behaviors
- or medical instabilities.

60 residents from one LTC (long term care) facility were divided into 3 groups of 20:

- Control
- Occupational Therapy (OT)
- Musical Exercise Therapy (MET)
Combined scales and indices assessed participants’ cognitive and physical levels at three times:
- one pre-test before the 10-week program,
- 1st post-test upon completion of the program,
- 2nd post-test 10 weeks after completion.

Results:
- Control group — gradual declines in all areas.
- OT and MET groups — both improved in all areas except “life satisfaction.”
- MET group only — an increase in “life satisfaction;” greater increase (than OT) in balance, and flexibility of the hips, knees and ankles.
- All improvements declined after program stoppage.

Ideally, long-term care facilities should offer programs that are regular and ongoing and feature musical exercise. The benefits of such a program do not merely slow, or prevent, declines in elders, but can actually improve certain areas of their lives.
At the University of Hawaii at Manoa (UHM), students in one of my courses took part in a volunteer opportunity with several other UHM nursing students at an elderly home care facility. The facility often held various daily activities such as video game playing, karaoke, and playing instruments. Students participated in one of their daily music sessions to do a form of musical intervention.

It was at The Plaza at Punchbowl, an assisted living facility in Honolulu, Hawaii
An intervention project

- Sample population:
  - 10 residents (2 males, 8 females)
  - Age group 65 and older

- Some residents were independent, while others had the aide of an assistive device.
  - Cane, walker, etc.

- Steps of intervention:
  - Loneliness questionnaire
  - Demonstration
  - Activity
  - Evaluation
A pre-measure activity was completed to assess the resident’s level of isolation and loneliness prior to any musical intervention.

UCLA loneliness scale:

- A scale that was developed to assess any subjective feelings of loneliness or social isolation.
- It consists of several questions that allow individuals to indicate how they feel in certain settings or situations on a scale that ranged from almost always to never.
- Before handing out the survey, it was explained that the results would be highly confidential and would not be shared with others.
- Residents were allowed to take several minutes to complete the survey and encouraged to answer it as honestly as possible.
Indicate how often each of the statements below is descriptive of you. **Circle** one letter for each statement:

- 0 indicates "I often feel this way"
- S indicates "I sometimes feel this way"
- R indicates "I rarely feel this way"
- N indicates "I never feel this way"

1. How often do you feel unhappy doing so many things alone?
2. How often do you feel you have nobody to talk to?
3. How often do you feel you cannot tolerate being so alone?
4. How often do you feel as if nobody really understands you?
5. How often do you find yourself waiting for people to call or write?

6. How often do you feel completely alone?

7. How often do you feel you are unable to reach out and communicate with those around you?

8. How often do you feel starved for company?

9. How often do you feel it is difficult for you to make friends?

10. How often do you feel shut out and excluded by others?
To determine your level of loneliness give yourself:

- 1 point for each question you answered "never" N
- 2 points for each question you answered "rarely" R
- 3 points for each question you answered "sometimes" S
- 4 points for each question you answered "often" O

Compute your score by adding the ten numbers together.

- Scores between 15 and 20 are considered a normal experience of loneliness.
- Scores between 21 and 29 indicates moderate loneliness.
- Scores above 30 indicate a person is experiencing severe loneliness. (Russell, 1996)
Residents filling out the UCLA Loneliness Scale at the Plaza at Punchbowl
Results from the PreMeasure

Scores between 15 and 20 are considered a normal experience of loneliness.
Scores between 21 and 29 indicates moderate loneliness.
Scores above 30 indicate a person is experiencing severe loneliness.
The Post-measure consisted of a series of questions that indicated how the residents felt after the activity:

- Did you like this activity?
- Would you want to do this activity again?
- Did you meet or socialize with new people?
- Did you feel happy during the activity?
- Would this type of activity be beneficial to your life?
- Did you enjoy the music?
- What did you think of the activity and how did it make you feel?
Results of Post-Measure

- Did you like this activity? (9 Yes)
- Would you want to do this activity again? (8 yes, 1 No)
- Did you meet or socialize with new people? (6 yes, 3 no)
- Did you feel happy during the activity? (9 yes)
- Would this type of activity be beneficial to your life? (7 yes, 1 no)
- Did you enjoy the music? (10 yes)
- What did you think of the activity and how did it make you feel? (range from “happy”, “good”, “invigorating”)
Dance, music, literature and reviews were important in promoting successful aging and the connection to their everyday life. (Journal of Gerontological Nursing, 2004)

Improvement in physical or motor competence, and social relationship factors, such as spending time with others, are important motives for older adults to engage in physical musical activity. (Hagan & Sandilands, 2008)
More information can be found at:


In conclusion:
– Try to read the signs early so you could get immediate help for yourself or a loved one.
– However, you can’t really prevent it from happening, so you can count on music therapy to help cope with this unfortunate disease.
– Music Therapy is a great way to improve the quality of life and well-being of both family, caregivers and patients.
Often times, elderly (with diseases/illnesses) are put into care homes or hospitals where they are given medications to reduce pain, regain memory, and so they can be taken better care of. However, many people don’t realize that there are music programs out there that are in place for seniors.
Some of these music programs are:

- Various church activities
- Organizational activities
- Special guest performances
- Outings to see musical performances
- Therapists working with seniors themselves using music (either instruments, vocal or listening to music)

However, not all nursing homes have access to all of these programs.

Some nursing homes have specific programs.
A specific curriculum used mostly with babies, but in this case, used with seniors as well.

This program consists of music that is well-known, (i.e. You are My Sunshine) nursery rhymes, chants and older songs.

This curriculum calls for families to work together, and often times, families attend the sessions together, including the babies and the seniors.

The program is fun for everyone!

This program also:
- Includes gross/fine motor movement activities.
- Allows babies and seniors to interact.
- Provides room for a multigenerational relationship to form.

Furthermore, it allows seniors to interact with music in many ways they would otherwise not be able to (i.e. singing, dancing, remembering stories from long ago about songs, etc.).
An interventional study done on falls and its correlation with patients with dementia.

It found that in the elderly, falls are among some of the leading causes of death.

Trying to find out if a certain type of music would aid in fall reduction.

After the study was conducted (200 patients in full time geriatric facilities, from 2005 until 2007), it was shown that if the patients were exposed to music for 5-10 minutes per day, the overall fall rate went down.

Think of possibly playing music in many nursing home facilities.

It could save time, money, and lives!

<table>
<thead>
<tr>
<th>AGE</th>
<th>FALL RISK</th>
</tr>
</thead>
<tbody>
<tr>
<td>65+</td>
<td>30%</td>
</tr>
<tr>
<td>85+</td>
<td>42 - 49%</td>
</tr>
<tr>
<td>100+</td>
<td>83% fall with injury, 50% injury related deaths</td>
</tr>
</tbody>
</table>
What happens in MT sessions?

- The can be either in a group or a one-on-one setting.
- Music is most often times played on instruments.
- Patient is often encouraged to play on instruments.
- Singing can also be part of a MT Session.
- Many physical changes in seniors can be seen.
- Some of these changes are: smiles, laughter, and mood changes. Often times, a senior will sing along, and dance, or move.
- All of these things are part of the MT sessions, and are very beneficial to the seniors.
In this video, a Music Therapist is filmed singing and playing the guitar with seniors.

You can see visible happiness in seniors, and hear phrases such as: “I remember that song,” and their singing of the song itself.

You can also see overall enjoyment, both for the seniors and for the therapist.

There are many positive effects in association with MT Sessions.
Music Therapy sessions

http://www.youtube.com/watch?v=HfQ2Ym3M00Q

- This video is a short video on Music Therapy that was included in an earlier module, but worth viewing again.
- Music Therapy is beginning to be more accepted today.
- Doctors, scientists, psychologists, and patients are beginning to see more and more that music can have a huge part in healing (emotional, physical, psychological), remembering, physical therapy, and in many more ways than can be documented.
In addition, Music can:

- Add joy and excitement to the lives of seniors.
- Provide some relief from pain.
- Aid in focusing.
- Aid in relaxation.
- Give opportunities to socialize with others.
- Allow seniors to become more mobile.
Music making:

- Allows patients with Alzheimer's Disease to be more relaxed, more responsive and overall, more focused.
- Decreases amount of agitation that is often associated with many diseases and illnesses.
- It was also discovered that seniors who played an instrument were more “physically fit” than those who did not play an instrument.
Music:

- Is an amazing tool that can be used to benefit everyone, not just seniors.
- Is enjoyable, fun, and uplifts everyone.
- Should be used more widely for therapy sessions.
Participants in a one month music therapy program, five days a week for about 30-40 minutes each day playing slow, rhythmic, sedative music, improvisation and music from their past, showed improvement in:

- Exacting a response.
- Vocal and physical movement.
- Reduced behavioral aggression.
- Agitation.
- Sleeping problems.
- Relaxing the body.
- Calming the mood.
- Increasing levels of the hormone melatonin, which is known to reduce stress and promote calm.
Establishing that music therapy approaches are an important component in the treatment of those who suffer from Alzheimer's.

- Music therapy can help reduce the individual prescription or tranquilizing medication a person takes.

- Help overall goals of rehabilitation.

- Facilitate mood improvement and self-expression.

- Stimulation of speech.

- Organization of mental processes.

- Promotion of physical activity.

Objectives of the Project
Participants will try different music therapy techniques that help people with Alzheimer's.

Particularly important is playing music from their past and encouraging interaction and active participation.

Objectives of the Project

- Assess, Treat, and Evaluate
Participants:

- 50 people, age sixty-five and older that are being treated for moderate to severe Alzheimer's.
- That live in an assisted living environment.
- That are being treated with medication such as: Namenda, Amyloid, Cognex, and Aricept.
- That may suffer from other health problems such as chronic arthritis pain, diabetes, sleep-disorder, high-blood pressure, and other forms of dementia.
A facility providing care of individuals who do not require hospitalization, and who cannot be cared for at home.
The term 'assistive technology' refers to 'any device or system that allows an individual to perform a task that they would otherwise be unable to do, or increases the ease and safety with which the task can be performed' (Royal Commission on Long Term Care 1999). This includes equipment and devices to help people who have problems with:

- speaking
- hearing
- eyesight
- moving about
- memory
- cognition (thought processes and understanding).

Assistive technology ranges from very simple tools, such as calendar clocks and touch lamps, to high-tech solutions such as satellite navigation systems to help find someone who got lost.
Improvisation

- In music therapy, improvisation is defined as a process whereby a client and therapist relate to each other wherein the client makes up music, musical improvisation, while singing or playing, extemporaneously creating a melody, rhythm, song, or instrumental piece.

- In clinical improvisation, client and therapist (or client and other clients) relate to one another through the music. Improvisation may occur individually, in a duet, or in a group. The client may use any musical or nonmusical medium within his or her capabilities. Musical media includes voice, body sound, percussion, and string, wind, and keyboard instruments. Nonmusical media can consist of images, titles, and stories. (Wikipedia)
Music goals are to:

- Improve motor functioning and skills.
- Improve general stamina and endurance.
- Decrease pain.
- Increase relaxation and stress reduction.
- Improve cognitive skills.
- Improve communication.
- Increase reality orientation.
- Provide sensory stimulation/integration experiences.
- Increase and improve appropriate emotional expression.
- Elevate mood.
- Reduce distress, trauma, apprehension and fear of illness or injury.
Music goals are to:

- Enhance awareness of self and environment.
- Increase frustration tolerance.
- Improve coping skills.
- Promote a sense of security and stability.
- Increase involvement and participation.
- Combat isolation and withdrawal and foster a sense of belonging.
“N-acetyl-5-methoxytryptamine, is a naturally occurring hormone found in most animals, including humans, and some other living organisms, including algae. Circulating levels vary in a daily cycle, and melatonin is important in the regulation of the circadian rhythms of several biological functions.” (Wikipedia)

- Music therapy increases serum melatonin levels in patients with Alzheimer's disease.
- Melatonin is an antioxidant that can help the immune system function better.
- Music therapy helps to combat sleep disorders.
- Insufficiency of melatonin can contribute towards depression.
- Music can improve mild cognitive impairment.
Regular music therapy treatment for those with Alzheimer's leads to:

- Increased memory recall, which contributes to reminiscence and satisfaction with life.
- Positive changes in mood and emotional states.
- Sense of control over life through successful experiences.
- Awareness of self and environment.
- Anxiety and stress reduction for older adult and caregiver.
- Management of pain and discomfort.
- Social interaction with caregivers and families.
Senile Dementia of the Alzheimer Type or simply Alzheimer's, is the most common form of dementia. This incurable, degenerative, and terminal disease was first described by German psychiatrist Dr. Alois Alzheimer in 1906. Generally it is diagnosed in people over 65 years of age, although the less-prevalent early-onset Alzheimer's can occur much earlier. An estimated 26.6 million people worldwide had Alzheimer's in 2006; this number may quadruple by 2050.

The earliest observable symptoms are often mistakenly thought to be 'age-related' concerns, or manifestations of stress. In the early stages, the most commonly recognized symptom is memory loss, such as difficulty in remembering recently learned facts. As the disease advances, symptoms include confusion, irritability and aggression, mood swings, language breakdown, long-term memory loss, and the general withdrawal of the sufferer as their senses decline. Gradually, bodily functions are lost, ultimately leading to death.” (Wikipedia)
Links used in preparing this presentation

- http://www.alzheimers.org.uk/factsheet/437
- http://www.westmusic.com/content/index.php?option=com_content&task=view&id=76&Itemid=156
- http://www.biomedexperts.com/Abstract.bme/10550905/Music_therapy_increases_serum_melatonin_levels_in_patients_with_Alzheimer_s_disease
- http://en.wikipedia.org/wiki/Melatonin
Links used in preparing this presentation

- http://musictherapyworld.net
- http://www.answers.com/topic/music-therapy
- http://users.rcn.com/kkcc/kathy/about.html
- http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/03/01/DDDB15VE34.DTL
• This presentation was created by Dr. Harvey with adaptations from projects by students R. Kitaguchi, J. Mulch, A. Yamamoto. Presentation design by Gordon Harvey. Editorial assistance by Patricia Harvey and Don Campbell.