What Music Can Do For Health Aging

Musetta C. Fu, MM, RN, MT-BC
PhD Student in Nursing Science
ARCS Fellow
School of Nursing
University of Washington
Seattle, WA

Shih-Yin Lin, MM, MT-BC, NMT
Music Therapist
Clinical Supervisor
Metro Music Therapy, Inc
Denver, CO

Objectives

Participants will:
Have a general understanding on the biology of aging.
Be able to identify attributes of healthy aging.
Be able to name the attribute(s) that is(are) addressed in a music therapy experience.
Be able to create at least one music intervention based on provided framework.

What Happens when a person gets old?

Biological changes:
Decreased cognitive function (loss of brain volume)
Risk for cardiovascular diseases (hardening vessels)
Decreased lung function (changes in respiratory system)
Decreased sensory function (loss of neuron and neurotransmitters)
Mood disturbance (neurotransmitters; e.g. Dopamine)
Poor sleep quality
Decreased mobility and physical function (Sarcopenia → Frailty)

Psychosocial changes:
Retirement, loss of incomes
Loss of friends, families
Decreased social interaction

Healthy Aging

www.agingstats.gov
Definitions of Healthy Aging

“Healthy Aging is the development and maintenance of optimal physical, mental, and social well-being and function in older adults.” (Center for Disease Control Aging Research Network, 2012)

“Active ageing allow people to realize their potential for physical, social, and mental well-being throughout the life course...” (World Health Organization, 2012)

Ultimate Goal

To improve HEALTH, FUNCTION, and QUALITY OF LIFE of older adults. (HealthyPeople 2020)

www.healthypeople.gov

Therapeutic Use of Music for Healthy Aging:
Evidence From Current Published Studies

Attributes of Health Status/QOL in Older Adults

Literature Review

Data Bases: PubMed, CINAHL, and PsycINFO

Key Terms: “music”, “aged OR aging OR elderly”, “healthy aging”, “independent living”, and “community dwelling”

Limits: “older adult age > 65”, “publication period 01/2001-01/2012”, and “English”

Total 14 articles were selected

Identified Conditions in Older Adults (in the selected articles)
Passive/Receptive M.T. | Active M.T.
--- | ---
Singular Modal | Multi-Modal | Multi-Modal
Music-listening | Music-listening (preferred & sedative music) + Relaxation Technique | 1. Music-based Multitask Training (Jaques-Dalcroze eurhythmics)
2. Individualized Piano Instruction
3. Music Appreciation
4. Other Music Groups (e.g. Choir)

Receptive Music Interventions

<table>
<thead>
<tr>
<th>Author</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chan et al. (2009)</td>
<td>Music listening → depression</td>
</tr>
<tr>
<td>Chan, Chan, &amp; Mok (2010)</td>
<td>Music listening → depression → blood pressure (BP), respiratory rate (RR), and heart rate (HR)</td>
</tr>
<tr>
<td>Lai (2004)</td>
<td>Improved emotions → depression → sleep quality</td>
</tr>
<tr>
<td>Lee, Chan, &amp; Mok (2010)</td>
<td>Music listening → depression → physical function; improved emotions; social functioning; chronic bodily pain</td>
</tr>
<tr>
<td>McCaffrey &amp; Freeman (2003)</td>
<td>Music listening → insomnia</td>
</tr>
</tbody>
</table>

Active Music Participation

<table>
<thead>
<tr>
<th>Author</th>
<th>Description</th>
</tr>
</thead>
</table>

Sleep Quality

Listening to Sedative Music → Reduced Depressive moods/increased Relaxation → Improved Sleep Quality

(Chan et al., 2010; Lai & Good, 2005)

Social Interaction

- Participation in music networks (e.g. choirs, instrumental ensembles, or music appreciation groups) (Hays, 2005a; Hays & Minichiello, 2005a)
- Listening to music → improved moods/attitudes → improved interpersonal skills and social function (Lee et al., 2010)
Psychological Well-being

Listening to soothing/preferred music → improved depression, emotions, and relaxation
(Chan et al., 2010; Chan et al., 2009; Lai, 2004)
Positive experiences of interacting with others in music activities → improved self-esteem and self-satisfaction
(Hays & Minichillo, 2005; Sole et al., 2010)
Music as a vehicle to experience and express a sense of spirituality
(Hays & Minichillo, 2009b)

Physiological Function

Music-listening → short-term respiratory rate, heart rate, & blood pressure; skin temperature → relaxation
(Chan et al., 2009; Lai, 2004)
Active music making → brain plasticity and prevent brain volume loss
(Wan & Shlaug, 2010)

Cognitive Function

Active music making → brain plasticity and prevent brain volume loss → Cognitive function
(Wan & Shlaug, 2010)

Individualized piano lessons → executive functioning and working memory
(Bogou, 2007)

Physical Function

Music-based multitasking program (Jaques-Dalcroze Eurhythmics) → Gait regularity and balance → Falls
(Trombetti et al., 2011)
Music interventions → vitality and physical functioning
(Lee et al., 2010)

Clinical MT Example 1

Midline-Crossing Drumming Activity

Facilitate the organization of movement in time, space, and force dynamics
Enhance therapeutically meaningful movements
Facilitate desired motion paths of the limbs/adjacent positions
Promote interpersonal interaction; promote endurance (music prevents boredom)

(Taat, 2008)
Ex#2: Themed Music Group

M-O-T-H-E-R (A Word the Means the World to Me)
I want a girl just like the girl that married dear old Dad
Ma, he's making eyes at me
Let it Be
My mammy
Shortenin' bread (mammy)
Que Sara Sara (mother)
Mother Machree
Mamas don't let your babies grow up to be cowboys
Pistol Packin' Mama
That's alright mama
Oh You Beautiful Doll

Ex #3: Musical Trivia
body parts songs

Head
Eyes
Ears
Cheek
Nose
Knee
Shoulders
Feet
Toe
Heart

Brain Storming
The More; The Better!

References


