Music Therapy for neuropsychiatric symptoms in the general hospital: a systematic literature review

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• Music Therapy
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• Not dementia/ delirium
• Not General Hospital

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Background
Neuropsychiatric symptoms in acute care

Delirium
• ‘acute neuropsychiatric syndrome…..’
• 20-30% of patients in general hospital
• NICE Recommended non-pharmacological interventions

Dementia
• ~25% (~50% not diagnosed) in the general hospital
• NICE Recommenced non-pharmacological interventions
Background – Music Therapy

• **Music Therapy** *(World Federation of Music Therapy)*

“The professional use of music and its elements as an intervention in medical, educational and everyday environments with individual, groups, families, or communities who seek to optimize their quality of life and improve their physical, social, communicative, emotional, intellectual and spiritual health and wellbeing.”

Used to support those living with dementia in

• Care homes
• Psychiatric Settings
• NOT in General Hospitals
Aim

Does music therapy improve the neuropsychiatric symptoms of patients with delirium and dementia in the general hospital setting?
Method – Search process

- Review protocol PROSPERO (CRD42015024691)
- Literature search (Medline, PsycINFO, CINAHL)
- Keywords (dementia, delirium, neuropsychological symptoms, music therapy, general hospital)
- Reference list of relevant reviews examined and forward citation
- Hand searching (British Journal of Music Therapy)
- Experts in field consulted
Method - Selection criteria

Inclusion criteria:
1. Study Type: Published peer reviewed primary studies.
2. Study Group: groups of at least 10 adults (> 16 years old) inpatients in a general hospital with a diagnosis of dementia/ and or delirium
3. Study Intervention: MT delivered by a Music Therapist (registered)
4. Study Outcomes: Changes in NPS as measured by validated rating scales.

Exclusion criteria:
1. Not a primary study
2. Not in a general hospital
3. Not music therapy
4. Not including dementia/ delirium
Method - Data extraction

Planned to extract on:

• Age
• Sex
• Method of recruitment
• Diagnostic criteria
• Setting
• Number in study
• Time scale

• Dropout rate
• Use of Scales
• Intervention
• Results
• Risk of Bias
Records identified through database searching
Medline n=896, PsycINFO n=1011, CINAHL n=3642

Total records identified (n=5549)

After duplicates removed (n=5044)

Studies excluded not meeting inclusion criteria (n=4912)

Studies identified through other sources (n=10)

Full text articles screened for eligibility (n=142)

Full text articles excluded:
Not a primary study (n=74)
Not in a general hospital (n=42)
Not music therapy (n=23)
Not including dementia/delirium (n=3)

Studies included in qualitative synthesis (n=0)
## Results - Not Music Therapy

### Table 1: Descriptive information of primary studies discussed in narrative review

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Study design</th>
<th>Setting</th>
<th>Main reason for exclusion from systematic review</th>
<th>Subjects (intervention / control)</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>McCaffrey (2009)</td>
<td>USA</td>
<td>RCT</td>
<td>Surgical ward in general hospital</td>
<td>No music therapist</td>
<td>11/11</td>
<td>Minimum 4 times daily for 3 days post operatively 1 hour Music listening (CD patient choice from researcher selection)</td>
</tr>
<tr>
<td>Helmes (2006)</td>
<td>Canada</td>
<td>Single case studies</td>
<td>General hospital</td>
<td>No music therapist</td>
<td>9 total (self-control) 7=dementia 2=acute confusion</td>
<td>Mean 5.6 episodes 30 minutes Music listening (Baroque music CD researcher choice)</td>
</tr>
</tbody>
</table>
Results - Not dementia/delirium

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<tbody>
<tr>
<td>Moss (2003)</td>
<td>UK</td>
<td>Observational study</td>
<td>Rehabilitation unit (medicine of the elderly)</td>
<td>No dementia/delirium diagnosis</td>
<td>14* (no control)</td>
<td>Weekly sessions for 12 weeks Individual or group MT (no details) Singing group</td>
</tr>
<tr>
<td>Lin (2011)</td>
<td>Taiwan</td>
<td>RCT</td>
<td>Surgical ward in general hospital</td>
<td>No dementia/delirium diagnosis</td>
<td>30/30</td>
<td>Minimum four times pre and post-surgery 30 minutes Music listening (own choice of CD)</td>
</tr>
</tbody>
</table>
Results - Not general hospital

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<tbody>
<tr>
<td>Raglio (2008)</td>
<td>Italy</td>
<td>RCT</td>
<td>3 nursing homes</td>
<td>Not general hospital</td>
<td>30 / 29 Dementia (mean MMSE 10)</td>
<td>30 minutes 16 weeks from MT (unclear if group or individual) Total 30 sessions</td>
</tr>
<tr>
<td>Svansdottir (2006)</td>
<td>Iceland</td>
<td>RCT</td>
<td>2 nursing homes, 2 psychogeriatric wards</td>
<td>Not general hospital</td>
<td>20 / 18 Moderate-severe dementia</td>
<td>30 minutes 3 times weekly for 6 weeks from MT 3-4 patients in each MT session Total 18 sessions</td>
</tr>
</tbody>
</table>

* Observational study on 14 patients in open group, participants may have changed during the study
RCT = randomised controlled trial
MMSE = Mini Mental State Examination (maximum score 30, score <26 indicates cognitive impairment)
MT = music therapist
CD = compact disc
Discussion - Quality assessment

Studies very small
Randomisation and blinding not consistently applied or described
Little consideration of bias
Presence of delirium rarely considered
Music rarely delivered by a music therapist
Exposure to music in control groups not reported
Dosage/ no of sessions variable.
Discussion - Strengths and limitations of methodology

**Limitations**
- Review yielded no studies which fitted the inclusion criteria
- May have missed foreign language articles
- Japanese database may have been relevant
- Following completion one study was found to meet our criteria
- *Creative music therapy in an acute care setting for older patients with delirium and dementia* (Cheong et al., 2016)
  - Country – Singapore
  - Study design – cohort
  - Setting – acute geriatric unit
  - Subjects intervention/ control – 25 patients with dementia and/or delirium
  - Intervention – creative music therapy, 3*30 mins over 3 days. Scored on mood and engagement.

**Strengths**
- Use of published and recognised guidelines and methods of how to conduct a systematic review
- Double searching and data extraction
- Experts were consulted
Conclusions and implications

- No published evidence for the use of music therapy for the treatment of dementia and delirium in the general hospital.
- Music delivery is feasible in this setting.
- Music may have a positive effect on neuropsychological symptoms of dementia and delirium.
- Interdisciplinary collaboration is key.
- Well designed randomised controlled trials of this complex intervention are needed.


8. Mathews J. The possibilities for music therapy in the acute geriatric medicine ward in a major teaching hospital. Leading Note June 2010; British Association for Music Therapy; London.


References cont.


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