What is the evidence for the effect of health promotion, management, and maintenance interventions within the scope of occupational therapy on the occupational performance, quality of life, and health-care utilization for community dwelling older adults?

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Significance of Question

- Chronic diseases cause 70% of all deaths globally each year (WHO, 2017)
- In United States, 75% of adults 65+ have multiple chronic conditions (CDC, 2016)
- Multiple chronic conditions are associated with:
  - decreased HRQoL (Barile et al., 2013)
  - decreased occupational performance (Barstow et al., 2015)
  - increased healthcare spending (CDC, 2016)
- Considering high health care costs and poor outcomes of older adults living with multiple chronic conditions, OT has an important role (Leland, Fogelberg, Halle, Mroz, 2017)
Health management and maintenance

“Developing, managing, and maintaining routines for health and wellness promotion, such as physical fitness, nutrition, decreased health risk behaviors, and medication routines” (AOTA, 2014)

• Past systematic review found evidence to support the role of client-centered OT in improving occupational performance related to health management for older adults (Arbesman & Mosley, 2012)
Scope of Question

- Population: Older adults (65 +)
- Intervention
  - Activity/occupation-based
  - Focused on habits and/or routines
    - Health promotion
    - Health maintenance
    - Health management
- Outcomes
  - Quality of life
  - Occupational performance
  - Health care utilization
Inclusion Criteria

- Peer-reviewed scientific literature
- Published in English
- Intervention approaches within scope of OT
- Participants with an average age of 65 or older
- Participants living in the community
Search Results

Number of Abstracts Reviewed = 1449

Number of Articles for Full Review = 154

Number of Articles Identified for Relevance to Focused Question = 38
# Level of Evidence

<table>
<thead>
<tr>
<th>Level of Evidence</th>
<th>Study Design</th>
<th>Number of Articles Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Randomized controlled trials</td>
<td>20</td>
</tr>
<tr>
<td>II</td>
<td>Two-groups, nonrandomized studies</td>
<td>6</td>
</tr>
<tr>
<td>III</td>
<td>One group, nonrandomized (e.g., pretest/posttest)</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td><strong>Total articles</strong></td>
<td><strong>38</strong></td>
</tr>
</tbody>
</table>
Location

Europe: 10
Canada: 5
US: 8
Asia: 6
Australia: 7
Participant Characteristics: Diagnoses and Age

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number of Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Disease</td>
<td>14</td>
</tr>
<tr>
<td>Diabetes</td>
<td>6</td>
</tr>
<tr>
<td>Heart Conditions</td>
<td>4</td>
</tr>
<tr>
<td>Well-elderly</td>
<td>4</td>
</tr>
<tr>
<td>COPD</td>
<td>3</td>
</tr>
<tr>
<td>Arthritis</td>
<td>2</td>
</tr>
<tr>
<td>Pain</td>
<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Number of Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>65-74</td>
<td>24</td>
</tr>
<tr>
<td>75-84</td>
<td>11</td>
</tr>
<tr>
<td>85+</td>
<td>1</td>
</tr>
<tr>
<td>Interventionist</td>
<td>Number of Studies</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>OT</td>
<td>5</td>
</tr>
<tr>
<td>Health Professional Team (including OT)</td>
<td>2</td>
</tr>
<tr>
<td>Health Professional + peer</td>
<td>4</td>
</tr>
<tr>
<td>Health Professional</td>
<td>6</td>
</tr>
<tr>
<td>Peer/Lay</td>
<td>7</td>
</tr>
<tr>
<td>Nurse</td>
<td>7</td>
</tr>
<tr>
<td>Unknown</td>
<td>5</td>
</tr>
</tbody>
</table>

13 of the studies included OT either as primary interventionist, as part of a team, or at times was an OT (e.g., OT or PT or nurse).
Outcome Measures

- **Quality of Life (QoL)**
  - primarily included SF-36 or diagnosis specific QoL measures (e.g., St. George’s Respiratory Questionnaire)

- **Occupational Performance**
  - varied greatly including COPM, social function assessments, ADL / IADL scales, etc.

- **Health Care Utilization**
  - number of days in hospital, number of admissions, number of visits to ER, number of visits to primary care physician, etc.
Key Features of Health Promotion Programs

**CDSMP / mCDSMP**
- Problem solving
- Skill mastery
- Group process
- Psychoeducational
- Goal setting
- Coping
- Peer Leader**
- Heterogeneous condition groups**

**Additional features**
- CBT features
- Diaries/journaling
- Energy conservation

**All interventions**
- Participatory/interactive
- Addressed habits or routines
Definitions of strength of evidence

- **Strong**: consistent results from at least 2 RCTs
- **Moderate**: consistent results from 1 RCT or >2 studies of lower levels of evidence
- **Limited**: few studies of low level of evidence
- **Mixed**: some studies supported intervention, others did not
- **Insufficient**: not enough studies or of too low quality to make any clear statement

(Adapted from U.S. Preventive Services Task Force, 2012)
### Findings: Strength of Evidence

#### Occupational Performance
- CDSMP/mCDSMP: **strong**
- Other groups: **strong**
- Individual: **strong**
- Groups and Individual: moderate

#### Quality of Life
- CDSMP/mCDSMP: moderate
- Other groups: **strong**
- Individual: **mixed**
- Groups and Individual: mixed

#### Health Care Utilization
- CDSMP/mCDSMP: insufficient
- Other groups: insufficient
- Individual: mixed
- Groups and Individual: insufficient
Limitations

- Variety of interventions (e.g., group vs. individual, in person vs. telephone) limits synthesis of results

- Variety of mechanisms of action (e.g., peer leader, goal setting) make it difficult to determine what is key finding that is driving the change

- Variety of outcome measures limits comparison of studies

- Generalization may be limited due to all studies occurring in middle and high income countries
Bottom Line for Occupational Therapy

- Addressing health management through occupation-based programs (group or individual) is effective in improving occupational performance for all older adults (not diagnosis specific).

- Individual programs make more of a difference in decreasing health care utilization than group programs.

- Consider mechanisms of action to facilitate change:
  - Goal setting
  - Coping techniques to deal with frustration, fatigue, pain, etc.
  - Problem solving
  - Skill mastery / practice

- Studies took place throughout the world, demonstrating potential application in multiple health care systems.
Future Research

- Heterogeneous vs. homogeneous condition groupings
- Peer leader vs. health professional leader vs. both
- Telephone or virtual interventions vs. face to face interventions
- Effectiveness of intervention component vs. combination of components
Acknowledgements:

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**Key Reference:**
References


References


