

# Best Evidence Summaries of Topics in Mental Healthcare

**BEST in MH** *clinical question-answering service*

## Question

“For older adults in residential care settings, how effective are social groups/social activities compared to any other intervention, for improving patient outcomes?”

## Clarification of question using PICO structure

<i>Patients:</i>	Older adults in residential care settings
<i>Intervention:</i>	Social groups/social activities
<i>Comparator:</i>	Any other intervention / no intervention
<i>Outcome:</i>	Improving patient outcomes

## **Clinical and research implications**

There is some evidence, from two methodologically flawed systematic reviews, that cognitive stimulation interventions may be effective in improving cognition and quality of life in people with mild to moderate dementia. However, available data were limited, particularly with respect to quality of life outcomes and long-term effectiveness. There was no evidence to support the effectiveness of any other type of social group or social activity intervention.

Further research is needed to confirm the possible effects of cognitive stimulation and to assess its long-term effectiveness. Studies assessing the effectiveness of other types of social group or social activity intervention are also needed.

## **What does the evidence say?**

### ***Number of included studies/reviews (number of participants)***

We identified three systematic reviews which included data relevant to this evidence summary.<sup>1,2,3</sup> Two reviews assessed multiple non-pharmacological interventions, only some of which were considered relevant.<sup>1,2</sup> One review reported data on the effectiveness of three relevant interventions (cognitive stimulation interventions, reminiscence groups, or group education and discussion sessions) for improving quality of life.<sup>1</sup> The second review reported data on the effectiveness of two relevant types of intervention (group activities, or group music therapy) for reducing agitation.<sup>2</sup> The final review only assessed the effectiveness of cognitive stimulation interventions; this review reported multiple outcomes (cognition, self-reported quality of life and well-being, communication and social interaction, mood, activities of daily living, and behaviour).<sup>3</sup>

### ***Main Findings***

The first review found no significant treatment effects on quality of life associated with either reminiscence groups or education and discussion groups.<sup>1</sup> This review also reported some data on the effectiveness of cognitive stimulation; these data were inconsistent, with a small treatment effect indicated only in study participants who were nursing home residents.<sup>1</sup> The second systematic review concluded that both group activities and group music therapy interventions could prevent worsening of agitation for the duration of the intervention; however, the data reported in this review were inconsistent and did not support these conclusions.<sup>2</sup> The review that assessed cognitive stimulation interventions alone found evidence to support the effectiveness of these interventions for improving cognition (SMD 0.41 (95% CI: 0.25 to 0.57), 14 studies) and some evidence that they may be effective in improving quality of life (SMD 0.38 (95% CI: 0.11 to 0.65), 4 studies).<sup>3</sup>

### ***Authors Conclusions***

One systematic review concluded that there was insufficient evidence to support the effectiveness of cognitive stimulation, reminiscence groups, or education and discussion groups, for improving the quality of life of people with dementia. A second systematic review concluded that group activities and group music therapy could prevent worsening of agitation, in people with dementia, during the intervention, but long-term effects remain unknown. A third systematic review concluded that cognitive stimulation interventions benefit cognition in people with mild to moderate dementia and that possible effect on self-reported quality of life and well-being require further exploration.

### ***Reliability of conclusions/Strength of evidence***

All three of the systematic reviews included in this evidence summary had significant methodological weaknesses. In particular, identification of relevant studies was inadequate, and/or summaries of findings were unreliable.

### **What do guidelines say?**

Although not specifically about a discussion group, the following guidance about cognitive stimulation is reported in SIGN guidelines for the management of people with dementia (CG86, 2006):

“Cognitive stimulation may occur informally through recreational activities, or formally through:

- a programme of memory provoking, problem-solving and conversational fluency activities
- the spaced retrieval method
- face name training

Formal cognitive stimulation produced a positive clinical impact on cognitive function in people with dementia. Although memory of specific pieces of information was improved it did not produce general benefits to memory function. These studies did not generalise to overall neuropsychological function and had short follow up.” (p.8)

NICE guidelines (CG42,2006) make the following recommendations about cognitive stimulation:

“People with mild-to-moderate dementia of all types should be given the opportunity to participate in a structured group cognitive stimulation programme. This should be commissioned and provided by a range of health and social care staff with appropriate training and supervision, and offered irrespective of any drug prescribed for the treatment of cognitive symptoms of dementia.” (p.26)

“No randomised studies have directly compared cognitive stimulation with an acetylcholinesterase inhibitor, and few randomised studies have compared the combination with an acetylcholinesterase inhibitor alone in people with mild-to-moderate Alzheimer's disease. Evidence suggests that cognitive stimulation is effective in people with dementia, but it is difficult to compare the magnitude of the effect with that of acetylcholinesterase inhibitors.” (p.47)

The evidence included in this summary is consistent with published guidelines.

**Date question received:** 03/07/2014

**Date searches conducted:** 11/07/2014

**Date answer completed:** 25/08/2014

### **References**

#### ***Systematic Reviews***

1. Cooper, C., Mukadam, N., Katona, C., Lyketsos, C. G., Ames, D., Rabins, P., ... Livingston, G. (2012). Systematic review of the effectiveness of non-pharmacological interventions to improve quality of life of people with dementia. *International Psychogeriatrics*, 24(6), 856-870.
2. Livingston, G., Kelly, L., Lewis-Holmes, E., Baio, G., Morris, S., Patel, N., ... Cooper, C. (2014). A systematic review of the clinical effectiveness and cost-effectiveness of sensory,

psychological and behavioural interventions for managing agitation in older adults with dementia. *Health Technology Assessment*, 18(39), 1-256.

3. Woods, B., Aguirre, E., Spector, A. E., & Orrell, M. (2012). Cognitive stimulation to improve cognitive functioning in people with dementia. *Cochrane Database of Systematic Reviews*, 2

### **Guidelines**

National Institute for Health and Care Excellence (2006) Dementia. Supporting people with dementia and their carers in health and social care. CG42. London: National Institute for Health and Care Excellence. <http://www.nice.org.uk/nicemedia/live/10998/30318/30318.pdf>

Scottish Intercollegiate Guidelines Network (2006) Management of patients with dementia. A national clinical guideline. CG86. Edinburgh. Scottish Intercollegiate Guidelines Network. <http://www.sign.ac.uk/pdf/sign86.pdf>

## Results

### Systematic Reviews

Author (year)	Search Date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Cooper et al. (2012)	01/2011	<p><i>Participants:</i> Patients with dementia, living either at home or in full-time care settings.</p> <p><i>Intervention:</i> Non-pharmacological interventions; interventions relevant to this evidence summary were cognitive stimulation, reminiscence groups, and discussion and education groups.</p> <p><i>Comparator:</i> No comparator was specified in the inclusion criteria; comparators included usual care, waiting list control, and pharmacotherapy.</p> <p><i>Outcome:</i> Quantitative measures of quality of life or wellbeing.</p> <p><i>Study design:</i> RCT</p>	20 (4 relevant to this evidence summary)	<p>This systematic review aimed to assess the effectiveness of non-pharmacological interventions for improving quality of life in people with dementia. A variety of interventions were assessed, of which three (cognitive stimulation groups, reminiscence groups, and education and discussion groups) were considered relevant to this evidence summary.</p> <p><i>Cognitive stimulation groups:</i> Two studies (Spector 2003 and Chapman 2004), both rated as “high quality” by the authors assessed the effectiveness of cognitive stimulation groups. Both of these studies were also included in the Cochrane review by Woods et al. (see below)</p> <p>One study (Spector 2003) compared 14 45-minute sessions of reality orientation (RO) and cognitive stimulation therapy (CST) over seven weeks to “usual care.”</p>	<p>The review question was defined by appropriate inclusion criteria.</p> <p>Three bibliographic databases were searched for relevant studies. However, the restriction to published studies, reported in English may have resulted in relevant data being omitted.</p> <p>The methodological quality of included studies was assessed using an</p>

				<p>Participants were recruited from residential care and day centres and had a mean baseline Mini Mental State Examination (MMSE) score of 14.4±3.8. For the community-dwelling subgroup, there was no significant difference in quality of life (change from baseline in QoL-AD) between the two groups. In the residential subgroup, there was slightly more improvement in quality of life in the cognitive stimulation group than in the usual care group (SMD 0.37 (95% CI: 0.04 to 0.71)).</p> <p>The second study (Chapman 2003) compared eight, weekly group sessions of 1.5 hours to “usual care.” Participants were recruited from the community and had a mean baseline MMSE of 20.9±3.6. This study found no significant differences between the groups at 4, 8, or 12 months, with respect to improvements in quality of life as measured by QoL-AD (SMD at 12 months 0.22 (95% CI: -0.43 to 0.87)).</p> <p><i>Reminiscence groups:</i> One study, rated as “high quality” by the authors, compared six 30-minute reminiscence groups to a general</p>	<p>appropriate tool and the process of assessment included measures to minimise error and/or bias. However, it was not clear whether the study selection and data extraction processes also included measures to minimise error and/or bias.</p> <p>The use of a narrative synthesis was appropriate.</p>
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				<p>discussion group and found no significant difference in Dementia Care Mapping (DCM), at follow-up, between the two groups. Study participants were nursing home residents. Participants had a mean baseline MMSE score of 23.5.</p> <p><i>Education and discussion groups:</i> One study, rated by the authors as “lower quality,” compared nine, weekly 1.5 hour structured discussion groups with a waiting list control. This study found no significant differences in improvement in quality of life (QoL-AD or SF-36) between the groups.</p>	
Livingston et al. (2014)	06/2012	<p><i>Participants:</i> Older adults with dementia, aged 50 years and over.</p> <p><i>Intervention:</i> Non-pharmacological interventions (behavioural, environmental or sensory interventions aimed to manage agitation), such as a cooking group, and varied social/skills-based activities.</p> <p><i>Comparator:</i> Any other interventions, such as usual care, and standard activities.</p> <p><i>Outcome:</i> Quantitative outcome; the primary outcome reported by the review was the Cohen-Mansfield Agitation Inventory (CMAI).</p> <p><i>Study design:</i> Any study with a comparator group, including before and after studies.</p>	160 (20 studies relevant to this evidence summary)	<p>This review aimed to assess the effectiveness and cost-effectiveness of non-pharmacological interventions for reducing agitation in people with dementia. The interventions assessed were classified into 23 broad types, of which two (group activities, and group music therapy) were considered relevant to this evidence summary.</p> <p><i>Group activities:</i> Ten studies assessed the effectiveness of a variety of activity-based interventions. With the exception of one study, all</p>	<p>The review reported a clear objective and defined appropriate inclusion criteria.</p> <p>A range of bibliographic databases were searched for relevant studies. These searches were</p>

				<p>participants were resident in care homes. Eight of the ten studies found significant improvements, associated with activity groups, during or immediately after the intervention. Numerical data were only reported for the two studies for which a standard effect size (SES) could be calculated -0.8 (95% CI: -1.4 to -0.2) and -0.6 (95% CI: -1.0 to -0.2). The two studies that measured agitation after the intervention (at 1 and 4 weeks) found no treatment effect.</p> <p><i>Group music therapy:</i> Ten studies evaluated group music therapy sessions, which followed a specific protocol and included listening to and joining in with music. With one exception, all studies were conducted in residential care settings. Four of the studies found a significant improvement in symptoms associated with music therapy, during or immediately after the intervention, five studies found no significant differences between the groups, and one study found a significant worsening associated with music therapy. The SESs for four studies, calculated by the review authors, ranged from -0.9 to -0.5. Two studies reported significant longer</p>	<p>supplemented by handsearching, reference screening and contact with study authors. No restrictions were placed on language or publication status.</p> <p>It was not clear whether measures to minimise error and/or bias (i.e. involvement of more than one reviewer) were employed throughout the review process.</p> <p>The methodological quality of included studies was assessed using a published tool.</p> <p>The use of a narrative synthesis</p>
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				term improvements, at two weeks and one month.	was appropriate, however, the summary of individual study results was not clear and numerical data were lacking.
Woods et al. (2012)	12/2011	<p><i>Participants:</i> Patients with dementia. The main diagnostic categories included were Alzheimer's disease and vascular dementia. Those including mild cognitive impairment were excluded.</p> <p><i>Intervention:</i> Cognitive stimulation, an intervention for people with dementia which offers a range of enjoyable activities providing general stimulation for thinking, concentration and memory usually in a social setting, such as a small group.</p> <p><i>Comparator:</i> No treatment, standard treatment, or placebo.</p> <p><i>Outcome:</i> Primary outcomes: cognitive performance (Mini-Mental State Exam, MMSE; Alzheimer's Disease Assessment Scale – Cognitive, ADAS-Cog), quality of life, everyday functioning, behaviour, social engagement and neuropsychiatric symptoms. Carer outcomes; well-being, depression, anxiety, burden, strain, coping and satisfaction.</p> <p><i>Study design:</i> RCT</p>	15 (9 were new publications and 6 had been included in an earlier review by the authors)	<p>This review aimed to assess the effectiveness of cognitive stimulation interventions for improving cognition in people with dementia.</p> <p>Seven studies were conducted in residential care settings, six studies included only community-dwelling participants, and two studies were conducted in mixed populations. The duration of the intervention ranged from 4 weeks to 24 months and session lengths range from 30 to 90 minutes.</p> <p><i>Cognitive function:</i> The results of an overall meta-analysis indicated that cognitive stimulation interventions were associated with a statistically significant improvement in cognition (SMD 0.41 (95% CI: 0.25 to 0.57)), based on 14 studies using a variety of outcome measures.</p>	<p>The review reported a clear objective and defined appropriate inclusion criteria.</p> <p>A range of bibliographic databases were searched for relevant studies, however, the restriction to published studies, reported in English may have resulted in relevant data being omitted.</p> <p>The review process included measures</p>


			<p><i>Communication:</i> Cognitive stimulation interventions were found to have a statistically significant positive effect of staff ratings of communication and social interaction (SMD 0.44 (95% CI: 0.17 to 0.71)), based on data from four studies.</p> <p><i>Quality of life:</i> Data from four studies indicated that cognitive stimulation interventions were associated with improvements in quality of life, as measured by QoL-AD, (SMD 0.38 (95% CI: 0.11 to 0.65)). Data from the Chapman 2004 study (see Cooper 2012, above) were not included in this analysis, but were reported separately; this study found no significant effect of cognitive stimulation of QoL-AD at 10 months follow-up (SMD 0.34 (95% CI: -0.19 to 0.88)).</p> <p><i>Other outcomes:</i> No treatment effects were found for mood, activities of daily living, general behaviour function, or problem behaviour.</p>	<p>to minimise error/bias (i.e. involvement of two reviewers) throughout.</p> <p>The methodological quality of included studies was assessed using an appropriate tool.</p> <p>Meta-analytic pooling of studies, which used a wide variety of interventions, comparators, outcome measures and study durations is of questionable validity.</p>
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
**Risk of Bias:**

***Systematic reviews***

Author (year)	Risk of Bias				
	Inclusion criteria	Searches	Review Process	Quality assessment	Synthesis
Cooper et al. (2012)					
Livingston et al. (2014)					
Woods et al. (2012)					

 Low Risk

 High Risk

 Unclear Risk

## Search Details

Source	Search Strategy	Number of hits	Relevant evidence identified
<b><i>SRs and Guidelines</i></b>			
NICE	<p>1 (discuss* NEXT group*) IN DARE 50 Delete</p> <p>2 (Social* adj2 activit*) IN DARE 37 Delete</p> <p>3 (Social* adj2 group*) IN DARE 40 Delete</p> <p>4 (group* adj2 intervention*) IN DARE 658 Delete</p> <p>5 #1 OR #2 OR #3 OR #4 756 Delete</p> <p>6 (Old* OR elder* OR senior* OR geriatric* OR aged OR ageing OR aging) IN DARE 7364 Delete</p> <p>7 MeSH DESCRIPTOR Geriatrics EXPLODE ALL TREES 40 Delete</p> <p>8 #6 OR #7 7383 Delete</p> <p>9 #5 AND #8 331 Delete</p> <p>1 (Old* OR elder* OR senior* OR geriatric* OR aged OR ageing OR aging) IN DARE 7365 Delete</p> <p>2 MeSH DESCRIPTOR Geriatrics EXPLODE ALL TREES 40 Delete</p> <p>3 #1 OR #2 7384 Delete</p> <p>4 (activit* adj2 (group* OR program* OR intervention* OR class*)) IN DARE 238 Delete</p> <p>5 #3 AND #4 128 Delete</p> <p>1 (cognitive NEXT stimulation) IN DARE 10</p>	459	2
DARE	discussion group dementia	41	3
<b><i>Primary studies</i></b>			
CENTRAL	1 "Discussion group*" 250	1	0

	<p>#2 "older adult*" 3775</p> <p>#3 elderly 16843</p> <p>#4 aged 364889</p> <p>#5 MeSH descriptor: [Geriatric Psychiatry] explode all trees 40</p> <p>#6 "geriatric patient*" 821</p> <p>#7 #2 or #3 or #4 or #5 or #6 368733</p> <p>#8 #1 and #2 14</p> <p>Central only 1</p>		
PsycINFO	<p>1. PsycINFO; "discussion group*".ti,ab; 1820 results.</p> <p>2. PsycINFO; (discussion adj2 group*).ti,ab; 5113 results.</p> <p>3. PsycINFO; GROUP DISCUSSION/; 3316 results.</p> <p>4. PsycINFO; 1 OR 2 OR 3; 7252 results.</p> <p>5. PsycINFO; GERIATRIC PATIENTS/; 10854 results.</p> <p>6. PsycINFO; "older adult*".ti,ab; 27645 results.</p> <p>7. PsycINFO; elder*.ti,ab; 51551 results.</p> <p>8. PsycINFO; 5 OR 6 OR 7; 78438 results.</p> <p>9. PsycINFO; 4 AND 8; 149 results.</p>	149	0
Embase	<p>1. EMBASE; "discussion group*".ti,ab; 1422 results.</p> <p>2. EMBASE; (discussion adj2 group*).ti,ab; 6404 results.</p> <p>3. EMBASE; GROUP PROCESS/; 8260 results.</p> <p>4. EMBASE; 1 OR 2 OR 3; 14515 results.</p> <p>5. EMBASE; GERIATRIC PATIENT/; 15278 results.</p> <p>6. EMBASE; "older adult*".ti,ab; 44000 results.</p> <p>7. EMBASE; elder*.ti,ab; 233338 results.</p> <p>8. EMBASE; 5 OR 6 OR 7; 275479 results.</p> <p>9. EMBASE; 4 AND 8; 285 results.</p>	285	0
Medline	<p>10. MEDLINE; "discussion group*".ti,ab; 1209 results.</p> <p>11. MEDLINE; (discussion adj2 group*).ti,ab; 3156 results.</p> <p>12. MEDLINE; GROUP PROCESS/; 11741 results.</p> <p>13. MEDLINE; 10 OR 11 OR 12; 14668 results.</p>	433	0

	<p>14. MEDLINE; GERIATRIC PATIENT/; 0 results.</p> <p>15. MEDLINE; "older adult*".ti,ab; 36523 results.</p> <p>16. MEDLINE; elder*.ti,ab; 181850 results.</p> <p>17. MEDLINE; 14 OR 15 OR 16; 211847 results.</p> <p>18. MEDLINE; 13 AND 17; 209 results.</p> <p>19. MEDLINE; exp AGED/; 2350140 results.</p> <p>20. MEDLINE; 17 OR 19; 2397497 results.</p> <p>21. MEDLINE; 13 AND 20; 1054 results.</p> <p>22. MEDLINE; "randomized controlled trial".pt; 378548 results.</p> <p>23. MEDLINE; "controlled clinical trial".pt; 88833 results.</p> <p>24. MEDLINE; randomized.ab; 299010 results.</p> <p>25. MEDLINE; placebo.ab; 155963 results.</p> <p>26. MEDLINE; "drug therapy".fs; 1715587 results.</p> <p>27. MEDLINE; randomly.ab; 216047 results.</p> <p>28. MEDLINE; trial.ab; 310602 results.</p> <p>29. MEDLINE; groups.ab; 1372770 results.</p> <p>30. MEDLINE; 22 OR 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29; 3377461 results.</p> <p>31. MEDLINE; 21 AND 30; 433 results.</p>		
<b>Summary</b>	<b>NA</b>	<b>NA</b>	

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