Cognitive stimulation therapy improved cognition and quality of life in dementia

Spector A, Thorgrimsen L, Woods B, *et al.* Efficacy of an evidence-based cognitive stimulation therapy programme for people with dementia: randomised controlled trial. *Br J Psychiatry* 2003;**183**:248–54.

Clinical impact ratings Mental health ★★★★★☆ Geriatrics ★★★★★☆

Q In people with dementia, does cognitive stimulation therapy (CST) improve cognition and quality of life?

METHODS

Design: randomised controlled trial.*

Allocation: concealed.*

Blinding: blinded (outcome assessors).

Follow up period: 7 weeks.

Setting: 23 day centres and residential homes (with ≥15 people in each) in the UK.

Patients: 201 people (mean age 85 y, 79% women) who met DSM-IV criteria for dementia, scored 10–24 on the Mini-Mental State Examination, were able to communicate, had sufficient vision and hearing to participate and use material in a group, and did not have major physical illness or disability.

Interventions: CST (n = 115): fourteen 45 minute sessions twice a week for 7 weeks. The programme used the concepts of reality orientation and cognitive stimulation and included the topics of money, word games, the present day, and famous faces. Usual activities (n = 86): in most settings, this consisted of doing nothing.

Outcomes: cognition, quality of life, communication, behaviour, global functioning, depression, and anxiety.

Patient follow up: 83%.

*See glossary.

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MAIN RESULTS

Analysis was by intention to treat. Cognition and quality of life were improved in the CST group but deteriorated in the usual activities group (table). The groups did not differ for any other outcome.

CONCLUSION

In people with dementia, cognitive stimulation therapy improved cognition and quality of life.

A modified version of this abstract appears in *Evidence-Based Nursing*.

Commentary

The finding that leisure time intellectual activity can significantly reduce the risk of dementia in people over the age of 75 years¹ lends credence to the possibility that CST might be effective in people with established dementia. The study by Spector *et al* provides evidence that CST in the form of reality orientation can significantly increase performance on selected neuropsychological tests. Even a small, 4 point decline in the Alzheimer's Disease Assessment Scale–Cognition among patients with mild to moderate Alzheimer's disease has been associated with a 35% increase in the odds of becoming dependent.² Activity-of-daily-living dependency from cognitive impairment is a major determinant of the time required to care for nursing home residents.³

Spector *et al* do not report the characteristics of patients who benefited from CST or the domains of cognitive function that were most likely to improve. It is unclear how much of the observed improvement occurred in orientation, which makes up 10 of 30 points on the MMSE and 8 of 70 points on the ADAS-Cog. Notably, staff ratings of personal care and behaviour—clinically relevant correlates of cognition—deteriorated similarly in the 2 groups.

Social and cultural factors, as well as systems of healthcare financing, will probably determine how well CST can be disseminated. Senior day care centres represent an ideal setting for CST, but their use varies substantially among ethnic groups in the US.⁴

Further studies of the costs and benefits of CST are needed before its widespread adoption can be recommended.

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1 Verghese J, Lipton RB, Katz MJ, *et al.* *N Engl J Med* 2003;**348**:2508–16.

2 Caro J, Ward A, Ishak K, *et al.* *BMC Neurol* 2002;**2**:6.

3 Arling G, Williams AR. *Med Care* 2003;**41**:802–12.

4 Kosloski K, Schaefer JP, Allwardt D, *et al.* *Home Health Care Serv Q* 2002;**21**:65–88.

Cognitive stimulation (CST) v usual activities in dementia*

Outcomes at 7 weeks	CST	Usual activities	RBI (95% CI)	NNT (CI)
≥4 points improvement on ADAS-Cog	30%	13%	131% (27 to 330)	6 (4 to 19)
	Mean change score		Mean score difference (CI)	
MMSE (maximum 30 [normal] points)	0.9	−0.4	1.1 (0.57 to 2.3)	
ADAS-Cog (maximum 70 points)	1.9	−0.3	2.4 (0.64 to 4.1)	
QoL-AD	1.3	−0.8	1.6 (0.09 to 3.2)	

*ADAS-Cog = Alzheimer's Disease Assessment Scale-Cog; Holden = Holden Communication Scale; MMSE = Mini-Mental State Examination; QoL-AD = Quality of Life-Alzheimer's Disease; Other abbreviations defined in glossary; RBI, NNT, and CI calculated from data in article.