Multisensory stimulation was not better than usual activities for changing cognition, behaviour, and mood in dementia


In older adults with dementia, does individualised multisensory stimulation (MSS) improve behaviour, mood, and cognition more than a control activity (eg, playing cards, looking at photographs, or doing quizzes)?

**METHODS**

Design: randomised controlled trial.

Allocation: (concealed).*

Blinding: unblinded.

Follow up period: 8 weeks.

Setting: a day hospital in the UK and psychogeriatric wards in the Netherlands and Sweden.

Patients: 136 patients (mean age 82 y) who had Alzheimer’s disease, vascular dementia, or mixed dementia; no major psychiatric comorbid conditions; moderate to severe cognitive impairment (Mini-Mental State Examination [MMSE] score 0–17); and were not confined to bed.

Interventions: eight 30 minute sessions of either MSS (n = 65) or activity (n = 71) twice a week for 4 weeks. Sessions occurred on an alternating basis with the same key worker (nurse, occupational therapist, or psychology assistant) whenever possible. MSS was matched to the patient’s needs and interests and included light and sound effects and materials for touching and smelling. The comparison activity sessions consisted of playing cards, doing quizzes, and looking at photographs with no clear aim or focus to the task. No intentional special MSS experiences were introduced.

Outcomes: behaviour and mood during and after sessions (Interact rating form); cognition (MMSE) and behaviour at home or on the ward (Behaviour Rating Scale) after 8 sessions in 4 weeks; behaviour on the ward (Behaviour Observation Scale for Intra-mural Psycho-geriatrics) and at day hospital (Rehabilitation Evaluation Hall and Baker scale) at 8 weeks, and mood at home or on the ward (Behaviour and Mood Disturbance Scale) after 8 sessions and at 1 month after sessions.

Patient follow up: 93%.

*Information provided by author.

**MAIN RESULTS**

Analysis was by intention to treat. Treatment groups did not differ for changes in behaviour and mood after sessions. During sessions, the MSS group recalled more memories than the activity group, whereas the CST study included MSS whenever possible; however, the type of stimulus and extent to which this occurred were not reported. The MSS group was compared with an activity session (active control), whereas the CST group was compared with ‘usual activities’ (passive control). The participants in the MSS study had greater cognitive impairment (mean MMSE score = 8.1) than those in the CST study (mean MMSE score = 14.4). The medication profiles of the participants were not reported in either study, although we know that none of the participants in the CST study were receiving acetylcholinesterase inhibitors—the only drugs that have been shown to improve cognition in dementia. The MSS study assessed changes in cognition, behaviour, and mood at baseline, during and after the trial, and after 4 weeks, whereas the CST study examined cognition, quality of life, communication, behaviour, and mood at baseline and after the trial.

Participants in the 7 week CST group were found to make significant improvements in cognition (4 or more points on the MMSE, number needed to treat = 6) and quality of life relative to those who received no activity. Although the authors of the CST study claim that CST has an effect of similar magnitude to acetylcholinesterase inhibitors in improving cognition, this conclusion is based on an indifferently chosen comparison group (Maddocks et al 1995). Patients were not part of the same randomised controlled trial. We must wait therefore for a head to head comparison of CST and drug therapy. It may also be informative to compare group CST with individual MSS to examine better the relative effects of each treatment. Neither study showed significant changes in the behavioural and mood measures.

**CONCLUSION**

In people with dementia, one on one multisensory stimulation was no better than activity (eg, playing cards, looking at photographs, or doing quizzes) for changing behaviour, mood, or cognition.

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