Psychosocial treatments of psychological symptoms in dementia: a systematic review of reports meeting quality standards

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CRD summary
This review concluded that there was some limited evidence that some psychosocial interventions were more effective in reducing psychological symptoms compared with attention controls, but further more focused research was needed. The authors’ conclusions appear fairly cautious, but should still be interpreted with the limitations with the studies and potential for bias in the review in mind.

Authors' objectives
To assess the effectiveness of psychosocial treatments in reducing psychological symptoms in individuals with dementia.

Searching
MEDLINE, CINAHL, PsycINFO and The Cochrane Library were searched up to February 2008 for published or in press articles in English. Search terms were reported. References in earlier reviews and monographs were searched manually. Experts in the field were contacted.

Study selection
Randomised controlled trials (RCTs) or pre- versus post-test (repeated measures) studies that compared psychosocial treatments with another treatment and/or an “attention control” in reducing psychological symptoms such as anxiety, depression, irritability and social withdrawal in 10 or more individuals with dementia were eligible for inclusion. Eligible studies were required to meet criteria from a standard checklist (Altman et al 2001) that included random allocation to intervention and control groups, use of psychological outcome measures, provision of some statistical analysis and blinding. Studies were excluded if they did not report inter-rate reliability scores where multiple observers were used or if they were rated as being of weak quality.

Most of the included studies were conducted in USA; one was conducted in UK and one in Sweden. Studies were mostly undertaken in nursing homes or long-stay hospital wards. Interventions included activity/recreation, dementia care, exercise, movement and relaxation, music and sensory enrichment and reminiscence and validation therapy. Attention controls were equivalent alternative treatments. Study duration ranged from three to 52 weeks. Psychological symptoms were measured mostly by rating scales and also through observation.

Where necessary, a second blinded reviewer assessed 18% of studies for inclusion.

Assessment of study quality
Study quality was assessed according to Forbes (1998) with criteria on study design, participation and retention rates, measurement issues and statistical analysis. Studies were rated as strong, moderate, weak or poor.

The authors did not state how many reviewers performed the validity assessment.

Data extraction
Means and standard deviations were extracted to calculate effect sizes (ES): small (0.2), moderate (0.5) and large (0.8).

The authors did not state how many reviewers extracted data.

Methods of synthesis
Data were presented as a narrative synthesis and in tables, grouped by intervention type.
Results of the review

Twelve studies (n=763, range five to 127) were included in the review: seven RCTs; four repeated measures with randomised cross-over (RXT); and one non-RCT. Studies scored between 2 and 4 on the quality rating scale; six were rated as strong, five as moderate and one as weak. There were some discrepancies between details reported in the text and those reported in the tables (we have mainly used information provided in the text).

Six of the 12 studies showed that interventions were statistically significantly more effective than attention controls or other treatments.

Activity/recreation (one RCT, one cross-over trial): The RCT found that contentment and interest was greater in the three treatment arms (activities of daily living care and psychosocial activities, activities of daily living care alone and psychosocial activities alone) compared to attention control (personal interaction) (p<0.05), but no intervention was superior over the other. The cross-over trial found a moderate effect (0.54) in favour of activity/recreation suited to interests and skills compared to activity/recreation suited to interest or skills.

Exercise, movement and relaxation (two RCTs, one cross-over trial): One RCT found that patients who received an intervention that comprised strength, balance and flexibility exercises was statistically significantly more effective than a walking group and a social conversation control group (p<0.05). One RCT and one cross-over trial reported no statistically significant differences between groups.

Music and sensory enrichment interventions (one RCT, two cross-over trials): It appeared that one cross-over trial found a moderate effect (0.75) on irritability, depression and fear in favour of patients who received music while eating their dinner compared to patients who did not receive music (although this was not supported by the data provided in the table). One RCT and one cross-over trial reported no statistically significant differences between treatment groups.

Reminiscence and validation therapy (two RCTs): One RCT showed a moderate effect (0.5) on depression (but not irritability and social withdrawal) in favour of validation therapy compared to attention control (social group). The second RCT showed a statistically significant treatment by time interaction (p<0.05) in favour of reminiscence therapy compared to attention control (social group)

No statistically significant differences were found between dementia carer education interventions and attention controls (one RCT, 1 non-RCT).

Authors' conclusions

There was some evidence from a small number of studies that carer education, music, physical exercise, recreation and validation therapy were more effective in reducing psychological symptoms compared with attention controls. Further more focused research was needed.

CRD commentary

The review question and inclusion criteria were clearly defined. Various appropriate resources were searched for published and unpublished data. The search was limited by language, so language bias could not be ruled out. Appropriate criteria were used to assess study quality; most studies were rated as being of strong or moderate quality. The authors did not state their processes for validity assessment or data extraction. Only a small percentage of potentially eligible studies were checked in duplicate. Only a small number of studies with small sample sizes were included for the comparisons and the findings were conflicting: half the studies showed benefit and half showed no benefit. A narrative synthesis was appropriate given the differences in study methodologies. Few details on participant characteristics and intervention schedules were provided. Study durations were generally short term.

The authors' conclusions appear fairly cautious, but should still be interpreted with the limitations with the studies and potential for bias in the review in mind.

Implications of the review for practice and research

Practice: The authors did not state any implications for practice.
Research: The authors stated that future research should: include a requirement that participants demonstrate one or more psychological symptoms to a specified degree and for a specified time; deploy treatments in time-frames and setting when symptoms were most evident; report refusal and dropout rates; tailor treatments where practicable to participants' backgrounds and interests; report multiple outcomes for participants as well as caregivers; and outline treatments' costs, convenience and post-study take-up rates.

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