The effects of psychosocial methods on depressed, aggressive and apathetic behaviors of people with dementia: a systematic review
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CRD summary
This review concluded that there is limited evidence for the effectiveness of some psychosocial methods in reducing depressed, aggressive or apathetic behaviours in people with dementia, and that further research is needed. The authors' conclusions are likely to be reliable. However, given the method by which studies were selected, there is a small chance that some studies were missed.

Authors' objectives
To assess the effectiveness of 13 psychosocial methods for reducing depressed, aggressive or apathetic behaviours in people with dementia.

Searching
PubMed, the Cochrane CENTRAL Register, the Cochrane Database of Systematic Reviews, PsycINFO, EMBASE, CINAHL, INVERT, the Netherlands Institute for Health Services Research (NIVEL), the specialised register of the Cochrane Disease and Cognitive Improvement Group, SIGLE and DARE were searched to February 2003; the search terms were reported. The reference lists of relevant systematic reviews were also checked.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) and controlled clinical trials (CCTs) were eligible for inclusion in the review. Crossover trials with a sufficient washout period (which depended on the psychosocial method) were also eligible for inclusion.

Specific interventions included in the review
Studies evaluating any of the ten psychosocial methods distinguished by the American Psychiatric Association (APA), supplemented with three methods common to the Netherlands, were eligible for inclusion. The specific interventions in those studies eligible for the review were based on behaviour-, emotion-, cognition- and stimulation-oriented methods.

Participants included in the review
Studies of participants who had been diagnosed as having a type of dementia according to APA DSM-IIIR or DSM-IV criteria, ICD-10, or other comparable instruments, were eligible for inclusion. Studies of both in- and out-patients and of all severities of dementia were eligible. The mean age of the participants in the included studies ranged from 74.7 to 87.8 years. In the majority of the included studies, the participants had been diagnosed with moderate to severe dementia.

Outcomes assessed in the review
Studies using depression, aggression or apathy as outcome measures were eligible for inclusion in the review.

How were decisions on the relevance of primary studies made?
One reviewer first screened the titles and abstracts of studies and excluded any that clearly did not meet the inclusion criteria. Two reviewers then independently screened the full papers and any disagreements were resolved by discussion. A third reviewer was consulted if no consensus was reached.

Assessment of study quality
The quality of the included studies was assessed using a checklist developed by Van Tulder. This consisted of 11
criteria for internal quality, 6 descriptive criteria and 2 statistical criteria, with one point assigned for every criteria attained. Studies that met at least 6 criteria for internal validity, 3 for descriptive criteria and 2 statistical criteria were deemed to be of high methodological quality. Two reviewers independently assessed the validity of the included studies. Any disagreements were resolved by discussion.

**Data extraction**

Two reviewers independently extracted the data from the included studies. Any disagreements were resolved by discussion. Data on the psychosocial method, outcome measures and a short description of the results from each trial were extracted.

**Methods of synthesis**

How were the studies combined?

The studies were combined in a narrative using a method known as a 'Best Evidence Synthesis', which was developed by Van Tulder. This method requires at least one high-quality RCT or two high-quality CCTs to establish some evidence for an intervention. The studies were synthesised by taking account of the study design, methodological quality and outcomes of the studies.

How were differences between studies investigated?

Sensitivity analyses were performed by repeating the Best Evidence Synthesis in two ways: low-quality studies were excluded, and studies were rated as high quality if they met 4 criteria for internal validity (instead of the original 6).

**Results of the review**

Nineteen studies were included in the review: 10 RCTs (n>650), 8 CCTs (n>336) and 1 randomised crossover study (n=16).

Apathy (2 high-quality RCTs).

There was some evidence that people with moderate to severe dementia and high-care dependency are less apathetic when remaining in a multi-sensory stimulation/Snoezelen room than when receiving activity therapy or staying in a living room.

Depression (1 high-quality RCT).

There was limited evidence that people with probable Alzheimer's disease with major or minor depressive disorder, and living at home with their caregivers, are less depressed when their informal caregivers are trained in using behavioural therapy than when their informal caregiver either receives standard information from a therapist or does not receive any special training or information.

Aggression (1 high-quality RCT).

There was limited evidence that people living in nursing homes with probable Alzheimer's disease who are mobile, care-dependent, but relatively highly functionally disordered, are less aggressive when following psychomotor therapy groups than when following activity groups.

The sensitivity analyses did not affect the results of the review. There was no, or too limited, evidence that any of the other interventions included in the review had positive effects on apathetic, depressed or aggressive behaviours of people with dementia.

**Authors' conclusions**

There is some evidence that multi-sensory stimulation/Snoezelen reduces apathy in people in the latter stages of dementia, while there is limited evidence that behavioural therapy reduces depression and psychomotor therapy groups reduce aggression in people diagnosed with probable Alzheimer's disease. However, overall, the evidence remains quite
modest and further research needs to be carried out.

**CRD commentary**
The review question was clear in terms of the interventions, participants, outcomes and study designs that were eligible for inclusion in the review. A number of relevant sources were searched and unpublished papers were sought, which reduces the possibility of publication bias. It was not reported whether any language restrictions were applied, so it is not known whether the presence of language bias is possible. The methods used to extract the data and assess the quality of the included studies were adequate to minimise the risk of reviewer error and bias during these processes. However, the first stage of selecting studies for the review was susceptible to reviewer bias and error, which means that relevant studies might have been omitted at this stage. The quality of the included studies was assessed using adequate criteria, and was used in the synthesis of the studies. Given the diversity of the included studies, a narrative synthesis was entirely appropriate. The authors' suitably cautious conclusions follow from the evidence identified but, because of the methods used to select studies, there is a small chance that subjective decisions were made in the initial selection of studies for inclusion.

**Implications of the review for practice and research**
**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that the number of studies of sufficient quality on the effectiveness of psychological methods in dementia care is rather limited, and that further research is required.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.