Evidence-based psychological treatments for disruptive behaviors in individuals with dementia

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CRD summary
The authors concluded that there is evidence supporting the effectiveness of interventions based on behaviour problem solving and individualised progressive stress lowering for treating behavioural disturbances in dementia. The conclusions are based on the results of only small numbers of studies of unknown methodological quality and should therefore be treated with caution. The authors' recommendations for further research appear justified.

Authors' objectives
To identify evidence-based psychological treatments for behavioural disturbances in older adults with dementia.

Searching
PubMed, PsycINFO, CINAHL and the Cochrane Controlled Trials Register were searched for studies published in peer-reviewed journals before January 2006; the search terms were not reported. In addition, published reviews and (unspecified) journals were handsearched and reference lists of identified studies were screened.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were eligible for inclusion in the review.

Specific interventions included in the review
Studies of non-pharmacological psychological treatments (defined as interventions based on psychological theories or models of behaviour change delivered or supervised by mental health professionals) were eligible for inclusion. Interventions that targeted behavioural excess and/or behavioural deficits were included. The included studies evaluated interventions in which professionals or family carers were taught methods to decrease problem behaviours in patients. The duration of treatment ranged from 2.5 to 90 hours. Control interventions included attention, no intervention, minimal support, advice, drug treatment, routine care, educational materials, phone calls and waiting list. The studies were conducted in the community and in residential settings.

Participants included in the review
Studies of older adults with dementia and a level of behavioural disturbance that was defined by the individual study were eligible for inclusion. The review definition of behavioural disturbance included disruptive and distressing behaviours and behaviours that caused safety concerns and/or interfered with care requirements. The participants in the included studies had varying types and severity of behavioural disturbance.

Outcomes assessed in the review
Studies that objectively measured targeted disruptive behaviours at baseline and post-treatment were eligible for inclusion. The included studies measured outcomes using a variety of specified tools (the details were reported).

How were decisions on the relevance of primary studies made?
Four reviewers 'reviewed' the studies but no further details were provided.

Assessment of study quality
The authors did not state that they assessed validity.
**Data extraction**

Four reviewers 'coded' the studies. Any disagreements were resolved by discussion among the entire review team and majority consensus was reached (see Other Publications of Related Interest). For each study, the statistical significance of the results was determined.

**Methods of synthesis**

How were the studies combined?

The studies were grouped according to the presence or absence of a statistically significant treatment effect. Studies reporting such an effect were then grouped according to the type of intervention and examined to see if the treatment met evidence-based treatment (EBT) criteria. To be classified as an EBT, the interventions had to be supported by evidence from at least two published peer-reviewed studies with at least 30 participants randomised to the same treatment, or most studies or most outcomes within studies had to show positive treatment effects. In addition, the studies had to have documented evidence of adherence to a specific treatment protocol (see Other Publications of Related Interest).

How were differences between studies investigated?

Differences between the studies were discussed with respect to the treatment.

**Results of the review**

Fourteen RCTs (n=1,503) were included.

Six studies reported no significant difference between the treatment and control groups.

Two studies using interventions based on a progressively lowered stress threshold theory and five studies based on problem-solving behavioural therapy reported significant benefits with the interventions. Both of these interventions met EBT criteria. One study found a positive effect of individualised caregiver counselling interventions. However, a further study would be required for this intervention to meet EBT criteria.

Progressively lowered stress threshold theory.

One study reported significantly lower caregiver distress about behavioural problems (p<0.01) and a lower frequency of behaviour problems reported by non-spouses (p<0.01). The other study reported a significant reduction in behaviour problems.

Problem-solving behavioural treatments.

Three studies evaluated the 'Seattle Protocol'. One study reported significantly reduced caregiver and patient depressive behaviours (p<0.001 and p<0.01); another study reported significantly improved physical functioning and fewer restricted activity days (p<0.001) and significantly fewer depressive behaviours (p<0.02); and the third study reported significantly reduced frequency and severity of patients' behaviours (p<0.001), improved quality of life (p<0.05), reduced caregiver burden and depression, and improved caregiver sleep (all p<0.05). Two studies conducted in residential units reported a significant reduction in depressive symptoms (p<0.01 in one study) and a decrease in troublesome and dangerous behaviour (p<0.01 in the other study) for the intervention group.

**Authors' conclusions**

There was evidence supporting the effectiveness of behaviour problem-solving therapies and individualised progressive lowered stress interventions in combination with problem solving and environmental modification for the treatment of behavioural disturbances in dementia, but further research is required.

**CRD commentary**

The review addressed a clear question that was defined in terms of the participants, intervention and study design; inclusion criteria for the outcomes were broadly defined. Several relevant sources were searched, but no attempts were
made to minimise publication bias and it is not clear whether any language restrictions were applied. Methods were used to reduce reviewer error and bias in the selection of studies and extraction of data. The validity of the studies was not assessed systematically, thus it is difficult to determine the reliability of the evidence presented. Grouping studies by their results could have biased the assessment of the evidence. Potential reasons for the lack of significant results in some studies were not discussed. The absence of strict inclusion criteria for the outcomes increased the potential for selective reporting of the results. The conclusions were based on the results of only small numbers of studies, and the lack of an assessment of study quality makes it difficult to confirm their reliability. The conclusions should therefore be interpreted with caution, although the recommendations for further research appear justified.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice. Research: The authors stated that further research is required to evaluate interventions that meet EBT criteria (structured behaviour interventions and individualised counselling with problem solving and environmental modification) in different settings and programmes and in different patients, and to identify the most effective elements in these interventions. There is also a need to identify more sensitive and individualised outcome assessment methods to detect changes in targeted behaviours, to compare multicomponent interventions with behaviourial interventions, and to evaluate interventions in severely agitated patients. Psychologists must continue to develop and evaluate cost-effective interventions.

Funding
Funded in part by the National Institutes of Health, grant numbers AG10483, AG10845, MH01644 and MH072736.

Bibliographic details

PubMedID
17385980

DOI
10.1037/0882-7974.22.1.28

Other publications of related interest

Indexing Status
Subject indexing assigned by NLM

MeSH
Aged; Alzheimer Disease /epidemiology /therapy; Attention Deficit and Disruptive Behavior Disorders /epidemiology /therapy; Cognitive Therapy /methods; Dementia /epidemiology; Evidence-Based Medicine /methods; Humans

AccessionNumber
12007001295

Date bibliographic record published
31/01/2008

Date abstract record published
31/01/2008
Record Status
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.