
Behavioral interventions for agitation in older adults with dementia: an evaluative review

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CRD summary

This review examined the application of behavioural principles to the management of agitation among older adults with dementia. Given that the review had methodological limitations and the quality of the included studies was considered to be poor, the authors' conclusions are appropriately cautious.

Authors' objectives

To review the empirical literature on behavioural interventions to reduce agitation in older adults with dementia.

Searching

PsycINFO was searched from 1970 to 200; no search terms were reported. The reference lists of related reviews and articles were screened for additional studies.

Study selection

Study designs of evaluations included in the review

The authors did not state any inclusion criteria relating to study design.

Specific interventions included in the review

Studies evaluating interventions that were conceptualised behaviourally (with reference to principles such as reinforcement, stimulus control and punishment) and targeted at agitation characteristics were eligible for inclusion. A range of interventions were evaluated in the included studies.

Participants included in the review

Studies including participants aged 60 years or older (or with a mean age of at least 60 where ranges were not reported, or referred to as 'older' or 'elderly'), with a diagnosis of dementia, were eligible for inclusion in the review.

Outcomes assessed in the review

Studies reporting a form of behavioural measurement were eligible for inclusion. The target outcome behaviours included wandering, disruptive vocalisation, physical aggression and other agitated behaviours. A variety of definitions and measurement techniques were used.

How were decisions on the relevance of primary studies made?

The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality

The authors did not state that they assessed validity.

Data extraction

The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

Methods of synthesis

How were the studies combined?

The studies were combined in a narrative.

How were differences between studies investigated?

Heterogeneity was not formally assessed. The studies were grouped in the narrative synthesis according to the type of behaviour targeted.

Results of the review

Twenty-three (n=420) studies were included in the review. Fifteen were single-subject or case studies; the remaining eight studies included two or more experimental groups or pooled data from individual patients.

Wandering and hazardous ambulation.

Five studies reported a clinically meaningful effect for behavioural interventions, particularly those involving stimulus control techniques. Two studies reported contradictory findings in relation to the effects of two-dimensional grids. One study each supported the use of manipulating consequences and backward chaining procedures.

Disruptive vocalisation.

Differential reinforcement of other behaviour (DRO) procedures were effective in two studies, had mixed results in two studies and had no effect in one study. One study reported good control over disruptive vocalisation in one participant, but not a second when using functional analysis and noncontingent reinforcement.

Physical aggression.

Three single-subject case studies showed a clinically meaningful effect for an antecedent control intervention, adapting the environment to accommodate a patient's perceptual deficit, and combined DRO/cognitive-behavioural techniques, respectively.

Other agitated behaviours.

Single-subject case series have shown significant effects of antecedent control procedures involving cued recall on inappropriate urination and excessive toileting demands, and of a differential reinforcement of low rates of behaviour intervention on disruptive use of the telephone.

The results for interventions targeting a range of behaviours were given in the paper.

Authors' conclusions

The authors were cautiously optimistic about the application of behavioural principles to the management of agitation among older adults with dementia. They stated that, although the results of some studies were mixed and several studies revealed methodological shortcomings, many of them offered innovations that could be used in future, more rigorously designed, intervention studies.

CRD commentary

The review question was vaguely defined in terms of the participants, interventions and outcomes. Inclusion was not restricted by study design, consequently the majority of the included studies were case studies involving a single participant. Only a single electronic database was searched, with follow-up of references from retrieved articles, and it was unclear whether inclusion was restricted by language. Therefore, it is possible that relevant studies were not found. Although some aspects of methodological quality were mentioned in the review (i.e. study design), the validity of the included studies was not assessed systematically and procedures to limit bias and error in the review process do not appear to have been put in place.

The description of the patients and interventions was limited. The use of a narrative synthesis was appropriate given the diversity of the included studies. However, the authors' conclusions appear overly optimistic given the limitations mentioned above and the fact that the conclusions were based on a diverse group of poor-quality studies.

Implications of the review for practice and research

Practice: The authors did not state any implications for practice.

Research: The authors stated that future studies should attempt to replicate and extend the interventions reviewed, using more rigorous methodologies to further assess the effect of behavioural technologies on agitation in older adults with dementia. They also stated that future studies are required to 'test the limits' of learning in dementia, and that the related literature on behavioural interventions with individuals with learning disabilities should be consulted.

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