CRD summary
This review concluded that support groups for carers of patients with dementia were beneficial. The use of theoretical models, longer, more intense groups, the ratio of female caregivers, and carers' age significantly impacted on some outcomes. Given the limitations of the review process and the small to moderate effect sizes reported, the authors' conclusions should be interpreted with caution.

Authors' objectives
To determine the effectiveness of caregiver support groups for carers of patients with dementia and to identify variables that were predictive of outcome.

Searching
The Cochrane Library, PubMed, PsycINFO, PsycARTICLES, ERIC, AgeLine, CINAHL, Psychology and Behavioural Sciences Collection were searched for articles published in English between January 1998 and December 2009. Search terms were reported and MESH headings were used. Google was also used to identify articles. The reference lists of retrieved articles were handsearched for additional studies.

Study selection
Quasi or true experimental studies were eligible for inclusion if they evaluated the impact of professional support groups on psychological well-being, burden and social consequence in non-professional carers of patients with dementia. Types of support groups eligible for inclusion were mutual support groups, educational psychology groups and educational training groups. Studies evaluating Internet, telephone or community groups were excluded. Control groups eligible for inclusion were general care, waiting list, minimal support (information guides, personal consultation, traditional support groups or short break service). Measures of psychological well-being included: mental disorder; depressive symptoms; anger and hostility; anxiety; sentiment and mood; and sorrow. Social consequence was defined as social support, quality of life and relationship with the patient. Only quantitative studies were eligible for inclusion.

Forty percent of studies were based on a theoretical model. Most caregivers were female (72.5%). The proportion of spouses in the group ranged from 27 to 100%. The average age of participants ranged from 43.6 years to 71.8 years. Where reported, 16.7% of studies were of patients with mild dementia and in 50% they had moderate dementia.

It appeared that two reviewers performed the study selection but this was not explicitly stated.

Assessment of study quality
The authors developed a quality assessment scale following Cochrane Guidelines and Quality assessment Guidelines proposed by Juni et al. (2012). This scale evaluated study design, patient selection, loss to follow-up, valid assessment measures, objective outcome indicators, statistical analysis, adequate sample size, blinding of outcome assessment and follow-up assessments. This scale gave a maximum score of 11. High quality studies were deemed to score 8 or above. Studies with scores of 4 or less were categorised as low quality.

Data extraction
The mean and standard deviation of both groups were extracted and used to calculate effect sizes for each outcome in a study.

Two reviewers independently extracted the data for review.

Methods of synthesis
Pooled effect sizes with 95% were calculated using Hedges and Olkin's method (Hedges g). The analytic unit for the overall effect size was calculated as the average effect size of a variable. An effect size of 0.2 or less was considered small. An effect size of 0.5 represented a moderate effect and an effect size of 0.8 represented a large effect. Statistical heterogeneity was assessed using the $Q$ value and the $I^2$ statistic. Subgroup analyses were used to assess the impact of
the categorical variables, such as use of theoretical models and severity of dementia. Meta-regression analyses were used to assess the impact of continuous variables, such as length of time caring for patient, length of follow-up, on outcomes. A mixed effects model was used. The $Q_B$ statistic was used for between groups comparison. Sensitivity analyses were conducted to determine the impact of follow up time on outcomes. Publication bias was assessed using funnel plots and the fail safe $N$.

**Results of the review**

Thirty studies were included for review (number of patients not reported; sample size ranged from 16 to 406). Twenty studies reported random sampling. Ten studies were rated as high quality; 19 as moderate quality and one as poor quality. Follow-up ranged from immediate post-test to more than six months.

**The effect of support groups on psychological well-being, burden and social consequences:**

Support groups moderately improved caregivers’ mental health ($g=-0.44$, 95% CI -0.73 to -0.15; 19 studies, 1,779 participants, $I^2=86.6\%$) and depression ($g=-0.40$, 95% CI -0.72 to -0.08; 17 studies, participant number unclear, $I^2=86.03\%$). There was evidence of large statistical heterogeneity for both outcomes.

Support groups had a moderate effect on social consequences ($g=0.40$, 95% CI 0.09 to 0.71; 13 studies, participant number unclear) and a small effect on burden ($g=-0.23$ 95% CI -0.33 to -0.13; 24 studies, participant number unclear). There was evidence of large statistical heterogeneity for social consequences ($I^2=82.21\%$) but not for burden ($I^2=12.59\%$).

Sensitivity analyses of psychological well-being showed a moderate effect at different time points. Sensitivity analyses of burden showed a move from small to small to moderate effect at four to six months follow up. There was no evidence of publication bias.

**The effect of different variables on outcomes:**

Groups that used theoretical models ($Q_B=4.55$) and that lasted more than eight weeks with more than 16 hours ($Q_B=7.17$) improved psychological well-being significantly more than shorter groups or groups that did not use a model. Significant differences were also observed for depression. Other variables associated with an increased effect size for psychological well-being or burden were reported in the article. Meta-regression analysis demonstrated that a higher proportion of female participants was associated with better outcomes for psychological well-being and depression. Older participant average age was associated with less favourable outcomes for social consequences.

**Authors’ conclusions**

Support groups for carers of patients with dementia were beneficial for psychological well-being, depression, burden and social outcomes. The use of a theoretical model, longer more intense groups, the ratio of female caregivers and the age of carers significantly impacted on some outcomes.

**CRD commentary**

The review addressed a clear question with well-defined inclusion criteria. Several relevant databases were searched. The search was restricted to articles in English so language bias could not be ruled out. Data extraction was undertaken in duplicate, but the process was unclear for other stages of the review so reviewer error and bias could not be ruled out. Most studies were of moderate quality. Information was not provided on individual studies and the number of participants was not provided. This made it difficult to determine suitability of studies or the presence of clinical heterogeneity. There was evidence of statistical heterogeneity and attempts were made to identify the sources. It was unclear whether outcome measurement tools were valid and reliable measures, and whether they were sufficiently similar to combine. Both randomised and non-randomised studies were combined in the meta-analysis which may affect the reliability of the results.

Given the limitations of the review process and the generally small to moderate effect sizes reported, the authors’ conclusions should be treated with caution as they may not be reliable.

**Implications of the review for practice and research**

**Practice:** The authors stated that intervention sessions of more than eight weeks were recommended. Carers should be
provided with information and helped in problem solving around patient care.

**Research:** The authors stated that further experimental studies were needed investigating the moderating effect of different variables on outcomes in support groups for carers of dementia patients.

**Funding**
There were no conflicts of interest.

**Bibliographic details**

**PubMedID**
21308785

**DOI**
10.1002/gps.2660

**Original Paper URL**

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Adult; Aged; Caregivers /psychology; Cost of Illness; Dementia /nursing; Depression /etiology; Female; Humans; Male; Middle Aged; Outcome Assessment (Health Care); Self-Help Groups; Social Support

**AccessionNumber**
12011006292

**Date bibliographic record published**
20/03/2012

**Date abstract record published**
28/07/2012

**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.