An integrative review of interventions promoting self-care of patients with heart failure

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CRD summary
This review found some evidence that augmenting education programmes for heart failure patients improved patient outcomes. The review was not well reported. The range of interventions and outcomes reported, and the short length of most of the included studies mean that these findings cannot be considered to be reliable.

Authors' objectives
To investigate the efficacy of interventions to improve self-care in patients with heart failure.

Searching
MEDLINE, PsycINFO, CINAHL and The Cochrane Library were searched for items from 2000 to 2010. A brief search strategy was presented. References were handsearched. Only publications in English were considered.

Study selection
Any comparative study that used a non-pharmacological intervention that aimed to improve self-care in patients with heart failure was eligible for inclusion. Both control and treatment groups had to receive standard education on heart failure care. Studies had to measure self-care or factors associated with self-care, such as knowledge of self-care for heart failure.

Interventions were mostly delivered in one-to-one or group education or counselling sessions. Some patients had only one session. Eight out of 19 included studies used multimedia and remote monitoring methods. Six studies reinforced education by telephone. Most of the studies used cognitive-behavioural interventions, such as Bandura's social cognitive theory. Eight studies assessed only self-care maintenance, such as weight monitoring, and not management behaviour, such as contacting a doctor about changes in symptoms. Most of the outcomes were self-reported by patients. Eleven studies recruited patients who had been hospitalised for heart failure.

The number of reviewers who selected studies was not stated.

Assessment of study quality
No assessment of study quality was reported, but all included studies were randomised controlled trials.

Data extraction
Data were extracted on whether there were significant differences between intervention arms, for each study. The number of reviewers who extracted the data was not reported.

Methods of synthesis
A narrative synthesis was performed, reporting the characteristics of the studies and the number of studies that identified statistically significant benefits in the outcomes and measurements reported. No statistical synthesis was reported.

Results of the review
The 19 included studies had 3,166 participants; sample sizes ranged from 18 to 902. The mean age was 68.4 years; 57% of participants were male; and most were Caucasian. Typical follow-up ranged from three to six months, only one study had a follow-up at three years.

Thirteen of 17 studies reported significant improvement in self-care maintenance or management in the treatment group. Most of these significant results were for maintenance outcomes, including weight management, smoking cessation, medication adherence, and following a low-sodium diet. Four of six studies measuring knowledge reported a greater knowledge of self-care for heart failure with the intervention.

Health-related quality of life was significantly improved in the intervention group in most studies that assessed it. In
three out of four studies reporting hospital readmission rates, there were no differences between treated and control participants.

**Authors' conclusions**
Augmenting standard education for heart failure, with cognitive-behavioural strategies, improved patient outcomes.

**CRD commentary**
The review question and inclusion criteria were clear. Limitations placed on the searches meant that relevant unpublished studies or those not in English could have been missed. It was not clear whether the searches and data extraction were performed in duplicate, and reviewer bias in the selection and reporting of studies cannot be ruled out. The selected studies included various interventions and a large range of outcomes, most of which were self-assessed; it is unclear whether reliable conclusions can be drawn from such a range of information. Most of the studies were short-term and the long-term value of these interventions is not known. As most patients were Caucasian, the results may not apply to other ethnic groups. The authors reported only the number of studies with positive findings. The magnitude of these effects and the clinical and statistical significance of the overall results are unclear.

For these reasons, the results of this review cannot be considered to be reliable.

**Implications of the review for practice and research**
**Practice**: Standard education and counselling for patients with heart failure should be augmented to improve self-care. Self-care maintenance and management should be measured routinely.

**Research**: Further research was needed in interventions to improve self-care, with a particular focus on psychological interventions.

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