Psychosocial interventions in people with multiple sclerosis: a review
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CRD summary
This review evaluated the impact of psychosocial interventions on emotional well-being and quality of life in people with multiple sclerosis (MS), and assessed the quality of included studies. The authors concluded that there is some evidence for the benefit of exercise, support and participant pro-activity, but further research is needed. Given the methodological limitations, a cautious interpretation is appropriate.

Authors' objectives
To determine the effectiveness of psychosocial interventions in people with multiple sclerosis (MS) and to assess the methodological quality of studies in this field.

Searching
AMED, ASSIA, British Nursing Index, CAB Abstracts, CareData, CINAHL, EMBASE, IBSS, MEDLINE, ProQuest, PsycINFO, PubMed, the Cochrane CENTRAL Register, the Cochrane Multiple Sclerosis Group's Specialised Register, Web of Science, and Zetoc were searched to January 2006; the search terms were reported. Only papers written in English were eligible for inclusion. In addition, the references of retrieved articles were checked and relevant journals were handsearched.

Study selection
Study designs of evaluations included in the review
Studies of randomised controlled trials (RCTs) and quasi-experimental, cohort, case-control and case series designs were eligible for inclusion. Non-experimental studies were excluded.

Specific interventions included in the review
Studies of psychosocial interventions were eligible for inclusion. A definition of psychosocial intervention was not given in the text of the review. However, the search terms covered a broad range of interventions. Details of the interventions included were given in the report. The interventions were grouped into the following categories; cognitive-behavioural therapy (CBT) for depression, group psychotherapy, wellness and support, exercise and movement, relaxation, stress-management and other. The duration of the interventions ranged from 3 to 52 weeks.

Participants included in the review
Studies of people aged 18 years and older, with a diagnosis of MS at any level of disability and at any point along the clinical course, were eligible for inclusion. Patients with both chronic progressive and relapsing remitting MS were included. Where measured, the level of disability varied widely within and between studies. Both in- and out-patient populations were included in the review. The majority of the participants were aged 40 to 50 years, and 60 to 80% of the overall sample was female. Where reported, the time since diagnosis ranged from 6 months to 29 years.

Outcomes assessed in the review
Studies whose primary outcomes measures assessed quality of life and/or emotional well-being were eligible for inclusion. The instruments used to measure the outcomes varied between studies.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for review, or how many reviewers performed the selection.

Assessment of study quality
The quality of studies was assessed using the Downs and Black quality checklist for randomised and non-randomised studies. This checklist assesses the quality of reporting, internal validity, external validity and power. Each item was
Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. The authors stated that main findings of the study, including p-values and estimates of random variability (mean, standard deviation, standard error, confidence interval and inter-quartile range) were extracted. However, only descriptions of the direction of effect (with p-values) were reported in the text.

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative.

How were differences between studies investigated?
The studies were grouped according to intervention. Some differences in study quality and design were evident from the text.

Results of the review
Thirty-three studies (n=1,845) were included in the review. Nine were RCTs (n=1,104), thirteen were quasi-experimental designs (n=421), two were cohort studies (n=139), one was a case-control study (n=20) and eight were case-series studies (n=161).

All of the included studies had methodological weaknesses. The highest score achieved was 22 out of a potential 33 on the quality checklist; this was achieved by only three studies. Twenty-one studies (64%) scored 15 or less. Quality problems were evident in poor reporting, lack of external validity, measurement bias, selection bias and lack of power.

All studies included in the review reported positive effects for the intervention, but the studies were often poorly reported and had significant methodological weaknesses. Many studies did not report the magnitude or statistical significance of the effect. The authors of the review stated that three studies were of sufficient quality to provide evidence on the value of psychosocial interventions; the results of these are summarised below.

Two RCTs, which scored 22 on quality, demonstrated significant improvements in quality of life (p<0.005), vitality (p<0.05) and mental health (p<0.04) using education/information, multidisciplinary team support, goal setting, homework assignments and discussion forums. These interventions lasted 4 weeks and 12 weeks.

One RCT scored 22 on quality and reported significant benefits of structured exercise sessions on quality of life (no p-values reported) and mental health (p<0.008) when compared with home exercise alone.

Studies of CBT for depression, group psychotherapy, relaxation, music therapy and horse therapy, as well as further studies of wellness and support and exercise, reported significant improvements in some dimensions of emotional well-being and quality of life. However, methodological weaknesses in these studies limits the value of these findings.

Authors' conclusions
There was some evidence to indicate the efficacy of exercise, peer and multidisciplinary team support, goal setting, homework, education/information and discussion forums in improving emotional well-being and quality of life in patients with MS. However, given the limitations of the included studies, further research is required.

CRD commentary
The review was based on a clear research question. However, broad inclusion criteria for the participants, intervention and study design resulted in a high level of clinical and methodological heterogeneity. A number of sources were
searched. Studies were restricted to those reported in English, therefore relevant studies might have been missed. It was unclear whether attempts were made to identify unpublished studies, thus the possibility of publication bias remains. A comprehensive validity assessment was carried out using appropriate criteria and this was used to interpret the results. However, there was insufficient information on the study selection and data extraction processes to rule out reviewer error or bias.

The decision to combine the results in a narrative was appropriate given the variability between the studies. However, the reporting of the results of individual studies was limited (e.g. no effect size) and could have been made clearer by tabulation. In addition, there seemed to be some overlap in the grouping of interventions which might impact on the interpretation of the results. Given the methodological weaknesses of the review and the included studies, the authors' cautious conclusions are justified.

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

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

**Research:** The authors stated the need for more high-quality RCTs.

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