The most effective psychologically-based treatments to reduce anxiety and panic in patients with chronic obstructive pulmonary disease (COPD): a systematic review.

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Authors' objectives
To investigate whether psychological interventions are effective methods of reducing anxiety and panic in patients with chronic obstructive pulmonary disease (COPD).

Searching
MEDLINE, PsycLIT, CINAHL, ASSIA, the National Research Register, ISI (via BIDS), EMBASE, ClinPSYC, the Cochrane Controlled Trials Register, Dissertation Abstracts Online, Networked Digital Library of Theses and Dissertations, and the British Index to Theses were searched from 1985 to present. The search terms were reported. The reference lists of identified studies were also checked.

Study selection
Study designs of evaluations included in the review
The authors stated that randomised controlled trials (RCTs) were eligible for inclusion in the review.

Specific interventions included in the review
Studies of psychological interventions were eligible for inclusion. Interventions that consisted of exercise and education alone were excluded. The included studies used the following interventions: education and stress management, with and without exercise; pulmonary rehabilitation; (taped) relaxation; analytic, supportive or nurse psychotherapy; rehabilitation; and counselling.

Participants included in the review
Studies of patients suffering from COPD (covering chronic bronchitis and emphysema), where COPD diagnosis was based on lung function testing, were eligible for inclusion. Trials that contained industrial-related COPD patients and asthma sufferers were excluded from the review. It was implied that COPD patients in the included studies were suffering from symptoms of anxiety and/or panic.

Outcomes assessed in the review
Studies investigating the effects of an intervention on anxiety and/or panic were eligible for inclusion. Studies were excluded if they did not measure patient anxiety before and after the intervention. The authors did not specify which measures for anxiety and/or panic should be used. Half of the included studies used the State-Trait Anxiety Inventory. Secondary outcomes were included in the review: alleviation of dyspnoea, disability, quality of life, depression, impairment, knowledge, lung function, exercise tolerance, treatment credibility and medical orientation.

How were decisions on the relevance of primary studies made?
Two independent reviewers applied the inclusion criteria to the studies. The authors did not state how any disagreements were resolved.

Assessment of study quality
The validity of the included studies was assessed using the Jadad scale, which awards points for randomisation, blinding and withdrawals. Two independent reviewers assessed the quality of the included studies using the Jadad scale. The authors did not state how any disagreements were resolved.

Data extraction
Three independent reviewers extracted the data from each study using pre-existing data extraction forms. The effect
size of the intervention on anxiety was calculated from the pre-/post-anxiety scores and standard deviations. The authors classified effect sizes of 0.20 as small, 0.50 as medium, and 0.80 as large.

Methods of synthesis

How were the studies combined?
The authors provided a narrative summary of the studies grouped by features of the psychological intervention.

How were differences between studies investigated?
The authors did not formally investigate differences between the studies. It was clear from the report that considerable heterogeneity between the interventions was evident.

Results of the review

Six RCTs with a total of 324 participants were included.

The two studies that looked at relaxation-only techniques found a modest effect (0.47) when the intervention was administered by a post-graduate student, and a greater effect (0.93) for a taped relaxation approach administered by a female nurse.

The remaining studies that employed an exercise element as part of the psychological intervention showed effect sizes ranging from 0.43 to 0.65. These studies varied in their design and administration of the intervention. The review did not report any confidence intervals with the point estimates of effect sizes. The secondary outcome measures reported were impacts on breathlessness, disability and quality of life. The findings were variable and in each study different outcome measures were used. One included study scored the maximum of five on the validity assessment scale, 2 studies scored two and 3 studies scored one.

Authors' conclusions

There was a lack of evidence to support the use of psychological interventions for reducing anxiety in COPD patients.

CRD commentary

The inclusion criteria, with regard to the psychological interventions, were not well defined. This created difficulties in synthesising the research evidence. The criteria were not specific as to which secondary outcome measures were to be included; it appears that all those reported in the studies were included in the review. This lack of clarity may result in selective reporting. The different methods of defining COPD in the studies and the different methods of recruiting participants may have contributed to the unreliable findings. The authors used the Jadad scale for the quality assessment, which ignores the issue of allocation concealment.

The 95% confidence intervals around the point estimates of effect sizes were not provided, and nor were any other measures of variance reported. This makes it impossible to interpret the results in terms of whether there were any statistically-significant differences between the intervention and control groups.

The authors carried out an extensive search to identify relevant studies, but it is unclear whether non-English language papers were included in the review. The study results were not pooled in a meta-analysis, although the authors correctly attributed this to the presence of clinical heterogeneity. Details of the individual studies were tabulated clearly and the authors' conclusions are valid based on their findings.

Implications of the review for practice and research

Practice: The authors stated the importance of identifying patients newly diagnosed with COPD, such that precautions can be taken to reduce potential anxiety.

Research: The authors stated that future research would benefit from tighter inclusion and exclusion criteria for the patient sample and the outcome measures for anxiety and panic. Research on the treatment of panic in patients with
COPD is needed as none was identified in this review. The authors also suggested that the development of standardised measures for panic in COPD patients would be advantageous.

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