Follow-up on the treatment of panic disorder with or without agoraphobia: a quantitative review

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Authors' objectives
To compare the long-term efficacy of different treatments for panic disorder with or without agoraphobia.

Searching
The authors' previous meta-analysis on the short-term treatment of panic disorder with or without agoraphobia was an initial source of studies. Excerpta Medica, PsycINFO and Index Medicus were searched for additional, independently published follow-up data pertaining to the same set of short-term outcome studies.

Study selection
Study designs of evaluations included in the review
'Therapy outcome studies' of unclear design, where follow-up data were available, were included. A variety of designs were eligible for inclusion, none of which appeared to have a control group. Case reports, and studies that did not provide sufficient information to calculate effect sizes, were excluded.

Specific interventions included in the review
The specific interventions included: high-potency benzodiazepines, antidepressants, psychological panic management, exposure in vivo, antidepressants combined with exposure in vivo, and psychological panic management combined with exposure.

Participants included in the review
Patients where the main diagnosis was for panic disorder with or without agoraphobia.

Outcomes assessed in the review
The outcomes assessed were panic and agoraphobia.

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

Assessment of study quality
In the original meta-analysis on short-term outcome, fourteen items were used to assess the quality of the studies on the basis of: study population characteristics, control of the interventions evaluated, relevance of the assessments, presentation of the data, and the statistical analyses performed. In the original meta-analysis on short-term outcome, four reviewers assessed the studies by filling in coding forms. Each quality criterion was rated on a 5-point Likert-type scale. The end points of these scales were defined, with higher scores reflecting better quality. The scores were summed to give an overall quality score ranging from 14 to 70.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.

Methods of synthesis
How were the studies combined?
Effect sizes (Cohen's d) were calculated within each of the six treatment conditions, by subtracting the mean post-test or follow-up test from the pre-test, and then dividing the difference by the pooled standard deviation (SD). In studies where the mean and SD were not present, d was calculated from the statistic p.

For treatment groups consisting of different treatments, it was investigated whether the treatments could be considered as one group. The Kruskal-Wallis tests were not significant, indicating that the various treatments could be considered together for all treatment groups.

The magnitude of the effect sizes were analysed with the Kruskal-Wallis one-way analysis of variance by ranks. Where significant differences in the rank distribution occurred, the Mann-Whitney test was employed. To correct for type I errors introduced by the multiple comparisons, a Bonferroni correction was applied for 15 comparisons (alpha=0.003).

How were differences between studies investigated?
The authors do not state how differences between the studies were investigated.

Results of the review
One hundred and six studies pertaining to 222 treatment conditions were reviewed in the original meta-analysis on short-term outcome. Of these, 59 studies had long-term data available, and a further 9 studies were revealed from the additional search of computerised databases. Sixty-eight studies in total, pertaining to 106 treatment conditions, were included.

For panic, the mean Cohen's d was 1.11 (SD=0.70) at post-test and 1.28 (SD=0.61) at follow-up.

For agoraphobia, the mean Cohen's d was 1.36 (SD=1.10) at post-test and 1.41 (SD=0.82) at follow-up.

Significant differences were found in efficacy on agoraphobic measures at follow-up between the combination of antidepressants and exposure in vivo versus psychological panic management, exposure in vivo, and the combination of psychological panic management and exposure.

Authors' conclusions
Different treatment options for panic disorder with or without agoraphobia were effective at both posttest and follow-up.

CRD commentary
This was a credible review. It attempted to expand on a previous review by the same authors which assessed short-term outcomes (see Other Publications of Related Interest). The review relied heavily on the earlier work for its methodology, of which little is reported in the present article. The review appears to have been undertaken in a systematic way, but the conclusions were weakened by the methodological difficulty in combining studies that were not designed to assess long-term outcomes.

All the studies suffered from high attrition rates, poor recording of whether or not the treatment was continued, and the prescribing of additional treatments. These were all important methodological concerns. In addition, the validity of comparing treatment effects which were not actually compared in the primary studies, i.e. indirect comparisons, is questionable. In light of these methodological issues, the authors' conclusions should be viewed with caution.

Implications of the review for practice and research
The author states that further research concerning long-term treatment discontinuation of therapies, and interventions between post-test and follow-up, is required. This research should focus on both pharmacotherapy and psychotherapy.

Bibliographic details
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Other publications of related interest

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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.