Effect of feedback of treatment outcome in specialist mental healthcare: meta-analysis

Knaup C, Koesters M, Schoefer D, Becker T, Puschner B

CRD summary
This review found significant short-term beneficial effects on mental health outcomes of providing feedback of treatment outcomes to mental health practitioners and/or patients in specialist mental health services. These benefits were not observed in the long term. The authors’ conclusions reflected the results, but the absence of a validity assessment of included trials means that their reliability is unclear.

Authors' objectives
To evaluate the effects of providing feedback of treatment outcomes to mental health practitioners and/or patients in specialist mental health services.

Searching
MEDLINE, PSYNDEx, PsycINFO, the Cochrane Central Register of Controlled Trials (CENTRAL), the Cochrane Database of Systematic Reviews, the World Wide Web (using Google and Google Scholar) and Current Controlled Trials were searched to March 2008. Search terms were reported. Searches of reference lists of review articles and retrieved studies were also performed. The review was restricted to studies published in English or German. Articles available only as abstracts were excluded.

Study selection
Controlled trials that evaluated feedback interventions in adults with mental health problems who were treated in psychiatric or psychotherapeutic settings, and that provided information on patient outcomes, were eligible for inclusion. Feedback was defined as the provision of individual information on treatment outcome (e.g. mental health, unmet needs) based on standardised measures to mental healthcare professionals and/or patients. Studies were excluded where the results of the outcome assessment was used for routine screening or diagnosis.

The included trials were performed in a range of settings including community-based mental health services, university counselling centres and specialist mental health units; two trials were performed in in-patient psychotherapeutic clinics. Patients presented with a range of mental health conditions including: depression; dementia; schizophrenia; and eating, personality, affective, anxiety and mood disorders. Feedback was provided to therapists or staff and usually involved information regarding treatment status and changes over time, evidenced by the use of a variety of standardised assessments of psychological functioning. Patients received feedback in three trials, in addition to therapists and staff receiving feedback. The control group interventions were treatment as usual; one trial compared feedback with a control condition that consisted of additional mental health assessment.

Two reviewers applied the inclusion criteria independently and resolved any differences by discussion.

Assessment of study quality
The authors did not state that they assessed methodological quality.

Data extraction
Data were extracted on post-treatment means and standard deviation (SD) in the treatment and control groups; effect sizes were calculated using the Hedges procedure. If trials reported more than one scale or compound dimensions of an outcome, the reviewers calculated a single mean effect size for each trial. In the event of a trial reporting the results for more than two groups, the effect sizes of each control group were pooled to give one effect size per trial.

One reviewer performed the data extraction and the results were checked by a second reviewer.

Methods of synthesis
Pooled effect sizes and 95% confidence intervals (CIs) were calculated using a DerSimonian and Laird random-effects
model. The $I^2$ statistic was used to evaluate statistical heterogeneity across the trials. Meta-analyses were stratified according to duration of follow-up (less than three months, three to 12 months). Subgroup analyses on the basis of recipient of feedback, frequency of feedback and content of feedback were also performed. Publication bias was assessed using funnel plots and Egger's regression test.

**Results of the review**

Twelve trials ($n=5,458$ patients) were included in the review, including 10 RCTs and two controlled trials. Trial sample sizes ranged from 61 to 1,374 patients. Follow-up ranged between six weeks to 12 months.

**Short term effects** (nine trials; 10 comparisons; $n=4,009$ patients): Feedback provision led to significant beneficial effects on short term outcomes (overall effect $d=0.10$, 95% CI 0.01 to 0.19). Moderate heterogeneity across the trials was observed ($I^2=31\%$, $p=0.16$).

**Long term effects** (five trials; $n=573$ patients) There were no differences observed between feedback provision and control groups. Heterogeneity between the trials for this outcome was low ($I^2=0\%$, $p=0.69$).

**Treatment duration** (five trials; 981 patients): In the analysis of data on treatment length as an indicator of costs, there were no differences found between the feedback and control groups. Heterogeneity was moderate across the trials ($I^2=42.03\%$, $p=0.12$).

There were no statistically significant differences between groups observed for any of the subgroup analyses.

There was no evidence of publication bias ($p=0.76$).

**Authors' conclusions**

Feedback of outcome had a small, but statistically significant, effect on the short-term mental health outcomes of patients. These benefits were not observed in the long term, and no advantages were found in relation to reducing the costs of treatment.

**CRD commentary**

The review addressed a clear question and criteria for inclusion were stipulated. Relevant databases were searched for published trials but restriction of the review to published trials in certain languages means that there is a possibility of publication and language biases. The authors reported taking steps to reduce errors and biases in study selection and data extraction. They did not report conducting an assessment of validity, which made it difficult to assess the reliability of the evidence from included trials. Also, it may not have been appropriate to combine the results from randomised controlled trials (RCTs) with those from non-randomised trials; it may have been more suitable to present a sensitivity analysis restricted to the RCTs. The authors' conclusions reflected the results of the review, but the absence of a validity assessment, means that their reliability is unclear.

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

**Practice**: The authors stated that feedback on treatment outcomes should be provided continuously and regularly to both clinicians and patients.

**Research**: The authors stated that further research should evaluate the cost-effectiveness of the feedback provision and the relationship to treatment outcome. They also stated that active ingredients of outcome management should be investigated in greater detail, so that optimal feedback programmes can be tailored to the needs of specific subgroups of patients with mental illness, and to clinicians.

**Funding**

German Federal Ministry of Education and Research, grant number 01GL0504.

**Bibliographic details**

Database of Abstracts of Reviews of Effects (DARE)
Produced by the Centre for Reviews and Dissemination
Copyright © 2016 University of York