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[Intervention Review]

Psychological interventions for coronary heart disease

Ben Whalley², Karen Rees³, Philippa Davies⁴, Paul Bennett⁵, Shah Ebrahim⁶, Zulian Liu⁷, Robert West⁸, Tiffany Moxham⁹, David R Thompson¹⁰, Rod S Taylor¹

¹Peninsula College of Medicine and Dentistry, Universities of Exeter & Plymouth, Exeter, UK. ²Centre for Multilevel Modelling, Graduate School of Education, University of Bristol, Bristol, UK. ³Health Sciences Research Institute, Warwick Medical School, University of Warwick, Coventry, UK. ⁴Academic Unit of Psychiatry, School of Social and Community Medicine, University of Bristol, Bristol, UK. ⁵Cardiff School of Nursing and Midwifery Studies, University of Cardiff, Cardiff, UK. ⁶Department of Non-communicable Disease Epidemiology, London School of Hygiene and Tropical Medicine, London, UK. ⁷PenTAG, Peninsula Medical School, University of Exeter, Exeter, UK. ⁸Wales Heart Research Institute, Cardiff, UK. ⁹Wimberly Library, Florida Atlantic University, Boca Raton, Florida, USA. ¹⁰Cardiovascular Research Centre (CvRC), Australian Catholic University, Melbourne, Australia

Contact address: Rod S Taylor, Peninsula College of Medicine and Dentistry, Universities of Exeter & Plymouth, Veysey Building, Salmon Pool Lane, Exeter, EX2 4SG, UK. rod.taylor@pms.ac.uk.

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ABSTRACT

Background

Psychological symptoms are strongly associated with coronary heart disease (CHD), and many psychological treatments are offered following cardiac events or procedures.

Objectives

Update the existing Cochrane review to (1) determine the independent effects of psychological interventions in patients with CHD (principal outcome measures included total or cardiac-related mortality, cardiac morbidity, depression, and anxiety) and (2) explore study-level predictors of the impact of these interventions.

Search methods

The original review searched Cochrane Controlled Trials Register (CCTR, Issue 4, 2001), MEDLINE, EMBASE, PsycINFO, and CINAHL to December 2001. This was updated by searching the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE and EMBASE, PsycINFO and CINAHL from 2001 to January 2009. In addition, we searched reference lists of papers, and expert advice was sought for the original and update review.

Selection criteria

Randomised controlled trials of psychological interventions compared to usual care, administered by trained staff. Only studies estimating the independent effect of the psychological component with a minimum follow-up of six months. Adults with specific diagnosis of CHD.

Data collection and analysis

Titles and abstracts of all references screened for eligibility by two reviewers independently; data extracted by the lead author and checked by a second reviewer. Authors contacted where possible to obtain missing information.

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Main results

There was no strong evidence that psychological intervention reduced total deaths, risk of revascularisation, or non-fatal infarction. Amongst a smaller group of studies reporting cardiac mortality there was a modest positive effect of psychological intervention (relative risk: 0.80 (95% CI 0.64 to 1.00)). Furthermore, psychological intervention did result in small/moderate improvements in depression, standardised mean difference (SMD): -0.21 (95% CI -0.35, -0.08) and anxiety, SMD: -0.25 (95% CI -0.48 to -0.03). Results for mortality indicated some evidence of small-study bias, though results for other outcomes did not. Meta regression analyses revealed four significant predictors of intervention effects on depression were found: (1) an aim to treat type-A behaviours ($\beta = -0.32$, $p = 0.03$) were more effective than other interventions. In contrast, interventions which (2) aimed to educate patients about cardiac risk factors ($\beta = 0.23$, $p = 0.03$), (3) included client-led discussion and emotional support as core therapeutic components ($\beta = 0.31$, $p < 0.01$), or (4) included family members in the treatment process ($\beta = 0.26$, $p < 0.01$) were significantly less effective.

Authors' conclusions

Psychological treatments appear effective in treating psychological symptoms of CHD patients. Uncertainty remains regarding the subgroups of patients who would benefit most from treatment and the characteristics of successful interventions.

PLAIN LANGUAGE SUMMARY

Psychological interventions for coronary heart disease

Heart attacks and cardiac surgery may be frightening and traumatic, and can lead some patients to experience psychological problems. In addition, some psychological characteristics are linked to the development and progression of cardiac complaints. Psychological treatments for depression, anxiety, stress or maladaptive behaviours are sometimes offered to patients, either individually or as part of a comprehensive package of cardiac rehabilitation. This review examined studies where the effect of these psychological interventions could be distinguished from other components of rehabilitative treatment (e.g. exercise). We found evidence that psychological interventions may produce small to moderate reductions in depression and anxiety, and may also reduce cardiac mortality, but did not find evidence that they reduced the rate of heart attack or need for cardiac surgery, or total mortality.