

Effectiveness and cost effectiveness of counselling in primary care (Review)

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[Intervention Review]

Effectiveness and cost effectiveness of counselling in primary care

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ABSTRACT

Background

The prevalence of mental health and psychosocial problems in primary care is high. This review examines the clinical and cost-effectiveness of psychological therapies provided in primary care by counsellors.

Objectives

To assess the effectiveness and cost effectiveness of counselling in primary care by reviewing cost and outcome data in randomised controlled trials for patients with psychological and psychosocial problems considered suitable for counselling.

Search strategy

To update the review, the following electronic databases were searched on 25-10-2005: MEDLINE, EMBASE, PsycLIT, CINAHL, the Cochrane Controlled Trials register and the Cochrane Collaboration Depression, Anxiety and Neurosis (CCDAN) trials registers.

Selection criteria

All controlled trials comparing counselling in primary care with other treatments for patients with psychological and psychosocial problems considered suitable for counselling. Trials completed before the end of June 2005 were included in the review.

Data collection and analysis

Data were extracted using a standardised data extraction sheet. Trials were rated for quality using CCDAN criteria, to assess the extent to which their design and conduct were likely to have prevented systematic error. Continuous measures of outcome were combined using standardised mean differences. An overall effect size was calculated for each outcome with 95% confidence intervals (CI). Continuous data from different measuring instruments were transformed into a standard effect size by dividing mean values by standard deviations. Sensitivity analyses were undertaken to test the robustness of the results. Economic analyses were summarised in narrative form.

Main results

Eight trials were included in the review. The analysis found significantly greater clinical effectiveness in the counselling group compared with usual care in the short-term (standardised mean difference -0.28, 95% CI -0.43 to -0.13, n = 772, 6 trials) but not the long-term

(standardised mean difference -0.09, 95% CI -0.27 to 0.10, n = 475, 4 trials). Levels of satisfaction with counselling were high. There was some evidence that the overall costs of counselling and usual care were similar.

Authors' conclusions

Counselling is associated with modest improvement in short-term outcome compared to usual care, but provides no additional advantages in the long-term. Patients are satisfied with counselling. Although some types of health care utilisation may be reduced, counselling does not seem to reduce overall healthcare costs.

PLAIN LANGUAGE SUMMARY

Counselling for psychological and psychosocial problems in primary care

Counselling for psychological problems is better than usual general practitioner care. People who receive counselling in primary care from a trained counsellor are more likely to feel better immediately after treatment and be more satisfied than those who receive care from their general practitioner. However, in the long term, counselling is not any better than GP care. Patients are satisfied with counselling. Although some types of healthcare utilisation may be reduced, counselling does not seem to reduce overall healthcare costs.

BACKGROUND

The prevalence of mental health and psychosocial problems in primary care is high (Goldberg 1992), and there are concerns that service provision by general practitioners (GPs) and the primary care team is variable, ineffective, and unresponsive to the needs of patients. There are many different ways of delivering services for mental health and psychosocial problems (Bower 2005). One model involves mental health specialists working directly in primary care to provide psychological therapies. Counsellors have been involved in this model of service provision.

Counsellors come from different professional backgrounds and use a variety of treatments on a wide range of clients (Bolger 1989). However, counselling in primary care is often associated with brief treatments provided for a wide range of psychosocial problems, and often based on non-directive or person centred approaches, or using an eclectic mixture of therapeutic strategies.

The first reports of counsellors working in primary care were published in the early seventies (Harray 1975, Anderson 1979). There is variation in the nature and provision of counselling services between countries in Europe (Cohen 1979).

Uncontrolled studies (e.g. Harray 1975, Anderson 1979, Waydenfeld 1980, Coe 1996, Booth 1997, Baker 1998, Keithley 1995) reported positive outcomes such as a reduction in consultation and prescription rates and high levels of patient and professional satisfaction. However, the methodological limitations of these studies has meant that concerns about the efficacy of counselling in primary care remain (Roth 1996).

Counselling has become firmly established in the United Kingdom National Health Service (NHS). In England and Wales, between one third and one half of general practices have on site counselling services provided by a range of mental health practitioners (Sibbald 1993, Mellor-Clark 2001). This ad hoc expansion of counselling services places increasing demands on a resource limited health care system and contributes to the uneven distribution of mental health services in primary care (Kendrick 1993). Early studies suggested that some mental health professionals providing counselling services lacked appropriate qualifications and were referred problems outside their knowledge (Sibbald 1993), leading to the suggestion that some individuals may be harmed by counselling (Corney 1992). However, more recent research has indicated that concerns about counsellor qualifications and appropriateness of referral may have been overstated (Mellor-Clark 2001). Nevertheless, concerns remain as to whether the development of counselling in primary care represents a cost-effective use of resources.

OBJECTIVES

The primary aim of the review was to examine the evidence base for the effectiveness and cost effectiveness of counselling in primary care.

The objectives were:

1. To identify all randomised controlled trials (RCTs) of counselling in primary care.
2. To assess clinical effectiveness by reviewing RCTs of counselling in primary care for patients with psychological and psychosocial problems.
3. To assess cost effectiveness by reviewing economic analyses of RCTs of counselling in primary care for patients with psychological and psychosocial problems.

METHODS

Criteria for considering studies for this review

Types of studies

Studies published before the end of June 2005 were eligible for entry in the review. All RCTs were considered for inclusion in the review.

A distinction can be made between explanatory and pragmatic RCTs. The former seek to impose the highest practical levels of control on variables (e.g. length of treatments, expectancy effects) in order to isolate the key 'active ingredients' and provide a valid test of whether a specific intervention is influencing outcome. Such trials focus on the internal validity of the study. In contrast, pragmatic trials seek to determine the relative 'value' of treatments as they would be provided in routine care settings, and seek to increase external validity without significantly compromising internal validity. In primary care, this means that interventions are not highly standardised, so as to reflect the clinical variation that exists in routine care contexts. The 'control group' ('usual care') is the mix of interventions that patients would usually receive, and may include interventions similar to counselling (such as referral to NHS psychological therapy services). Although lack of control over these aspects of the trial can make interpretation of findings complicated, the external validity of study findings is increased and such studies provide a relevant comparison group for estimates of cost effectiveness.

Types of participants

Males and females of all ages, consulting a GP with psychological or psychosocial problems considered suitable for counselling were eligible for the review.

Traditionally, counsellors have worked with people with situational or life-adjustment problems rather than mental illness per se, although referrals will vary depending upon counsellor expertise, doctor and patient choice and the availability of alternative mental health services. Although specialist counselling interventions have been developed for patients with specific problems such as drug and alcohol counselling, debt counselling, genetic counselling and abortion counselling, these specialist areas are considered beyond

the scope of this review and were excluded. Counselling for somatic or psychosomatic problems such as pain and fatigue (Raine 2002) were also excluded from the review.

Counselling has to be provided in primary care settings in order to be included in the review. Primary healthcare was defined by the Alma Ata declaration as essential healthcare based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. Descriptions of the core content of primary care vary (Fry 1994, Starfield 1992), but key aspects include:

- 1. First contact care, with direct patient access.
 - 2. Care characterised by patient-centeredness, family orientation, and continuity.
 - 3. A role in the co-ordination of care.
 - 4. A gatekeeping function in relation to access to specialist care.
- Counselling interventions in which the counselling was offered in the patient's own home were included in the review, if the referral was from a primary care practitioner.

Types of interventions

As noted above, counselling is a generic term that can be used to describe a range of mental health and psychosocial interventions provided in primary care. The precise boundaries of counselling interventions for the present review are described below.

For the purposes of the review, counselling was not an integral component of other mental health care activities (e.g. nursing, medical care) but constitutes a distinct and separate treatment intervention, offered as a series of sessions, following an assessment which generates a therapeutic plan.

The definition of counselling used was derived from the British Association of Counselling and Psychotherapy (BACP 1992). 'Counselling is the skilled and principled use of relationships which develop self-knowledge, emotional acceptance and growth, and personal resources. The overall aim is to live more fully and satisfyingly. Counselling may be concerned with addressing and resolving specific problems, making decisions, coping with crises, working through feelings and inner conflict, or improving relation-

ships with others. The counsellor's role is to facilitate the client's work in ways that respect the client's values, personal resources and capacity for self determination'.

Counselling may be described using a number of specific terms, including non-directive, person-centred and process-experiential (Elliott 2003, Department of Health 2001). In addition, counsellors may use a range of therapeutic techniques including cognitive behavioural therapy and psychodynamic therapy.

Counselling may be offered by a variety of professionals (e.g. counsellors, community psychiatric nurses (CPNs), practice nurses, social workers, clinical psychologists, GPs and health visitors). In this review, there were no specific inclusion or exclusion criteria related to professional background. However, formal counselling training was considered essential, to standardise expertise and practice. Only practitioners with a formal counselling qualification equivalent to BACP accreditation levels (www.bacp.co.uk/accreditation/index.html) were included in the review.

Types of outcome measures

Three main types of outcome measure were eligible for inclusion in the review:

- a. mental health symptoms such as depression and anxiety
- b. social and occupational functioning
- c. patient satisfaction

Both self-report and interviewer-rated measures were eligible for the review, and measures could use continuous scales or dichotomous categories.

Cost data included:

- a. referrals within the NHS
- b. referrals to external agencies
- c. medication prescribed
- d. GP consultations
- e. costs of lost production (i.e. time lost from work due to illness)
- f. patient costs (such as travel and child care costs associated with attending treatment)

Search methods for identification of studies

The search strategy used for the original version and first update of the review is available (Table 1).

Table 1. Original search strategy

Terms	
Details of the search for the first version of the review.	
1. Electronic searching of databases. A qualified librarian assisted researchers with electronic searches of several databases:	

MEDLINE, EMBASE, AMED, ASSIA, HPLA/HEALTHSTAR, DHSS DATA, DARE, NHSeed, HELMIS, ECONLIT and CINAHL. Searches commenced in 1996 and were updated throughout the review.

2. Specialised databases were searched including PSYCLIT and COUNSEL.LIT. Searches commenced in 1996 and were updated throughout the review period.

3. Hugh McGuire, Cochrane Collaboration Depression, Anxiety and Neurosis (CCDAN) Trials Co-ordinator, searched the Cochrane Controlled Trials Register on the Cochrane Library, 1997; Issue 2. In addition, the CCDAN Review Group trials register was searched.

3. Handsearching of a specialist counselling journal was undertaken by one of the reviewers (NR), in consultation with the Baltimore Cochrane Centre, which is co-ordinating the development of the International Register of Clinical Trials for the Collaboration, including the co-ordination of handsearching efforts.

4. Grey literature (e.g., Conference proceedings, dissertations, government documents, internal reports, agency reports) was searched. The grey literature database, SIGLE, was searched electronically, as was DISS (Dissertations Index).

5. Reference lists from books, journal publications and grey literature were scanned, and references followed up.

6. Personal communication. The researchers contacted subject experts and CCDAN members to identify further published or unpublished controlled trials.

For the updated review, searches were restricted to those databases judged to be high yield in the first version of the review: MEDLINE, EMBASE, PSYCLIT and CINAHL, the Cochrane Controlled Trials register and the CCDAN trials register. These databases were searched using the same keywords, from the date of the original searches to June 2001.

SEARCH TERMS

The electronic search of databases was comprehensive. The breadth of the key word search meant that the reviewers identified many studies that were not controlled trials. The key word search was deliberately not restricted to methodological key words, because it was anticipated that some controlled trials would be missed due to poor indexing. Moreover, given the range of patients that counsellors treat, and the range of professionals who offer counselling, a broad search strategy was considered essential in order to include all relevant trials. DARE (Database of Reviews of Effectiveness) and NHSeed (NHS Economic Evaluations

database) were searched at the outset of the Review (1996) and Effectiveness and cost effectiveness of counselling in primary care (Review)

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again in 1998. Both databases are produced by the NHS Centre for Reviews and Dissemination at York, England.

MEDLINE

(1966 - 1995)

- 1 = family-practice
- 2 = primary-health-care#
- 3 = primary adj care
- 4 = counseling
- 5 = psychotherapy#
- 6 = psychology-clinical
- 7 = 1 or 2 or 3
- 8 = 4 or 5 or 6
- 9 = 7 and 8

(1977 - 1997)

- 1 = psychotherapy
- 2 = general practice
- 3 = 1 and 2

(1/97 - 1/98)

- 1 = family-practice
- 2 = primary-health-care#
- 3 = primary adj care
- 4 = counseling
- 5 = psychotherapy#
- 6 = psychology-clinical
- 7 = 1 or 2 or 3
- 8 = 4 or 5 or 6
- 9 = 7 and 8

(1/98 - 6/01)

- 1 = family-practice
- 2 = family practice
- 3 = general practice
- 4 = general practitioner\$
- 5 = primary-health-care#
- 6 = primary health care
- 7 = primary care
- 8 = counseling#
- 9 = psychotherapy#
- 10 = psychotherap\$
- 11 = psychology-clinical
- 12 = 1 or 2 or 3 or 4 or 5 or 6 or 7
- 13 = 8 or 9 or 10 or 11
- 14 = 12 and 13

(1975 - 1996)

- 1 = family practice
- 2 = primary-health-care#
- 3 = primary adj care
- 4 = counseling
- 5 = psychotherapy#
- 6 = psychology-clinical
- 7 = 1 or 2 or 3
- 8 = 4 or 5 or 6
- 9 = 7 and 8

EMBASE

(1988 - 6/01)

- 1 = primary adj care
- 2 = primary-health-care#
- 3 = general-practice or general-practitioner
- 4 = counseling#
- 5 = psychotherapy#
- 6 = clinical-psychology
- 7 = 1 or 2 or 3
- 8 = 4 or 5 or 6
- 9 = 7 and 8

DHSS-DATA

(1983 - 1995)

- 1 = primary-care
- 2 = general practice or general-practitioners
- 3 = primary-care-nurs\$
- 4 = primary-health-care-teams
- 5 = general-practice-attachment-schemes
- 6 = counselling
- 7 = counselling-by-nurse
- 8 = counsellors
- 9 = counselling-services
- 10 = marriage-guidance-counselling
- 11 = psychotherapy
- 12 = behaviour-therapy
- 13 = brief
- 13 = brief adj psychotherapy
- 14 = marital-therapy
- 15 = supportive-therapy
- 16 = psychotherapists
- 17 = brief psychotherapy
- 18 = 1 or 2 or 3 or 4 or 5
- 19 = 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17

20 = 18 and 19

ASSIA (Applied Social Sciences Index and Abstracts)

(1987 - 1995)

- 1 = primary adj care
- 2 = primary-health-care
- 3 = general-practice or general practitioners
- 4 = counselling
- 5 = brief-counselling
- 6 = marriage-guidance
- 7 = psychotherapy
- 8 = behaviour-therapy
- 9 = brief-therapy
- 10 = client-centred-therapy
- 11 = cognitive-therapy
- 12 = developmental-therapy
- 13 = marital-therapy
- 14 = interpersonal-psychotherapy
- 15 = 1 or 2 or 3
- 16 = 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14
- 17 = 15 and 16

AMED (Allied and Alternative Medicines)

(1985 - 1995)

- 1 = primary adj care
- 2 = general adj (practice or practitioner\$1)
- 3 = family practice
- 4 = counselling or counsellors
- 5 = psychotherap\$
- 6 = clinical adj psychology
- 7 = 1 or 2 or 3
- 8 = 4 or 5 or 6
- 9 = 7 and 8

PSYCLIT

(Journal articles 1974 - 1990; 1991 - 6/01)

(Chapters & Books 1/87 - 6/01)

- 1 = counselling
- 2 = group-counselling
- 3 = marriage-counselling
- 4 = microcounselling
- 5 = premarital-counselling
- 6 = psychotherapeutic-counselling
- 7 = rehabilitation-counselling
- 8 = counsel\$
- 9 = conjoint-therapy
- 10 = family-therapy

11 = social-casework

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12 = 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11
 13 = primary-health-care
 14 = primary health care
 15 = primary care
 16 = general-practitioners
 17 = family-medicine
 18 = family-physicians
 19 = family practice
 20 = general practice
 21 = 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20
 22 = 12 and 21

PSYCLIT

(Journal articles 1974 -1990; 1991 - 12/97)
 (Chapters & Books 1/87 - 12/97)

1 = medical-psychology
 2 = clinical-psychology
 3 = health-care-psychology
 4 = clinical psychologist
 5 = counsel\$
 6 = 1 or 2 or 3 or 4 or 5
 7 = primary-health-care
 8 = primary health care
 9 = primary care
 10 = general-practitioners
 11 = family-medicine
 12 = family-physicians
 13 = family-practice
 14 = general practice
 15 = 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14
 16 = 6 and 15

DISS (Dissertation Abstracts Online)

(1861 - 1997)

1 = primary care
 2 = primary health care
 3 = general practice
 4 = general practitioner\$
 5 = family practice
 6 = 1 or 2 or 3 or 4 or 5
 7 = counsel\$
 8 = psychotherap\$
 9 = marital therapy
 10 = 7 or 8 or 9
 11 = 6 and 10

SIGLE (Science for Information on Grey Literature in Europe)

(1980 - 09/97)

- 1 = primary care
- 2 = primary health care
- 3 = general practice
- 4 = general practitioner\$
- 5 = family practice
- 6 = counsel\$
- 7 = psychotherap\$
- 8 = marital therapy
- 9 = 1 or 2 or 3 or 4 or 5
- 10 = 6 or 7 or 8
- 11 = 9 and 10

COUNS.LIT (Counselling Literature)

(Website search January 1998)

Personal communication with the Director of the Counselling in Primary Care Trust recommended three keywords to cover all RCTs of counselling in primary care. These included

- 1 = randomised controlled trial
- 2 = outcome
- 3 = effectiveness

Two separate searches were undertaken, the first using 'outcome or effectiveness' as multiple words to find in the keyword field, the second using 'randomised controlled trial' as multiple words to find the keyword field.

HELMIS (Health Management Information Service)

(1984 - 1998)

- 1 = family-therapy
- 2 = psychotherap\$
- 3 = counselling
- 4 = counsel\$
- 5 = counselling\$.key
- 6 = group-therapy
- 7 = behaviour-therapy
- 8 = marriage-guid\$
- 9 = 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8
- 10 = primary-health-care\$
- 11 = general-pract\$
- 12 = gp\$
- 13 = social-work\$
- 14 = cpn\$
- 15 = community-psychiatric\$
- 16 = health visit\$
- 17 = 10 or 11 or 12 or 13 or 14 or 15 or 16
- 18 = 9 and 17

(1984 - 1998)

1 = primary-health-care

2 = general-pract\$

3 = 1 or 2

4 = clinical and psychology

5 = behaviour-therap\$

6 = psychotherapy

7 = cognitive and behaviour\$

8 = 4 or 5 or 6 or 7

9 = 3 and 8

ECONLIT (Economic Literature)

(1969 - 3/98)

1 = family-practice

2 = family physician\$

3 = general practice

4 = general practitioner\$

5 = primary care

6 = primary health care

7 = counsel\$

8 = psychotherap\$

9 = 1 or 2 or 3 or 4 or 5 or 6

10 = 7 or 8

11 = 9 and 10

CINAHL (Nursing and Allied Health)

(1982 - 6/01)

1 = counseling#

2 = counsel\$

3 = psychotherapy#

4 = psychotherap\$

5 = clinical psycholog\$

6 = primary-health-care

7 = primary health care

8 = primary care

9 = family-practice

10 = family practice

11 = physicians-family

12 = family physician\$

13 = general practice

14 = general practitioner\$

15 = 1 or 2 or 3 or 4 or 5

16 = 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14

17 = 15 or 16

COCHRANE CONTROLLED TRIALS REGISTER

(2001, Issue 2)

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Table 1. Original search strategy *(Continued)*

1 = counseling 2 = counselling 3 = primary-care 4 = primary care 5 = general practice 6 = 1 or 2 7 = 3 or 4 or 5 8 = 6 and 7 Hugh McGuire also searched the CCDAN Register of RCTs and CCTs from handsearched journals using the keywords counselling and primary care (last searched 6/01).	
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For the second update of the review, searches were conducted (on 25-10-2005) on MEDLINE, EMBASE ([Table 2](#)), PsycINFO ([Table 3](#)), CINAHL ([Table 4](#)), the Cochrane trials register ([Table 5](#)) and the CCDAN trials register ([Table 6](#)). The MEDLINE search strategy is shown below.

Table 2. EMBASE search strategy

Terms	
1 exp COUNSELING/ 2 exp Psychotherapy/ 3 counsel\$.mp. 4 supportive therapy.mp. 5 humanistic.mp. 6 client centred.mp. 7 client orientated.mp.	

8 client centered.mp.
 9 non-directive.mp.
 10 nondirective.mp.
 11 experiential.mp.
 12 insight oriented.mp.
 13 insight orientated.mp.
 14 client oriented.mp.
 15 person centred.mp.
 16 person centered.mp.
 17 person oriented.mp.
 18 person orientated.mp.
 19 nonprescriptive.mp.
 20 non prescriptive.mp.
 21 non-prescriptive.mp.
 22 rogerian.mp.
 23 client orientated.mp.
 24 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or
 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23
 25 exp Ambulatory Care/
 26 exp Community Health Services/
 27 exp Community Mental Health Centers/
 28 exp Family Practice/
 29 exp Primary Health Care/
 30 exp Private Practice/
 31 (ambulatory adj care).mp.
 32 (ante-natal adj care).mp.
 33 (antenatal adj care).mp.
 34 ante-natal clinic.mp.
 35 antenatal clinic.mp.
 36 community health care.mp.
 37 community mental health care.mp.
 38 (family adj pract\$).mp.
 39 (family adj doctor\$).mp.
 40 (general adj pract\$).mp.
 41 (ambulatory adj care).mp.
 42 ambulatory health care.mp.
 43 community health.mp.
 44 primary care.mp.
 45 primary health care.mp.
 46 private pract\$.mp.
 47 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35
 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46
 48 controlled study.de.
 49 clinical trial.de.
 50 major clinical study.de.
 51 randomized controlled trial.de.
 52 double blind procedure.de.
 53 clinical article.de.
 54 random\$.mp.
 55 compar\$.mp.
 56 control\$.mp.
 57 follow up.mp.

Table 2. EMBASE search strategy *(Continued)*

58 ((singl\$ or doubl\$ or tripl\$ or trebl\$) adj (blind\$ or mask\$ or dummy)).mp.	
59 placebo\$.mp.	
60 (clinic\$ adj (trial\$ or study or studies\$)).mp.	
61 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 (4586969)	
62 human.de.	
63 nonhuman.de.	
64 62 and 63	
65 63 not 64	
66 61 not 65	
67 24 and 47 and 66	

Table 3. PsycInfo search strategy

Terms	
1 exp COUNSELING/	
2 exp Psychotherapy/	
3 counsel\$.mp.	
4 supportive therapy.mp.	
5 humanistic.mp.	
6 client centred.mp.	
7 client orientated.mp.	
8 client centered.mp.	
9 non-directive.mp.	
10 nondirective.mp.	
11 experiential.mp. [	
12 insight oriented.mp.	
13 insight orientated.mp.	
14 client oriented.mp.	
15 person centred.mp.	
16 person centered.mp.	
17 person oriented.mp.	
18 person orientated.mp.	

19 nonprescriptive.mp.
 20 non prescriptive.mp.
 21 non-prescriptive.mp.
 22 rogerian.mp.
 23 client orientated.mp.
 24 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or
 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23
 25 exp Ambulatory Care/
 26 exp Community Health Services/
 27 exp Community Mental Health Centers/
 28 exp Family Practice/
 29 exp Primary Health Care/
 30 exp Private Practice/
 31 (ambulatory adj care).mp.
 32 (ante-natal adj care).mp.
 33 (antenatal adj care).mp.
 34 ante-natal clinic.mp.
 35 antenatal clinic.mp.
 36 community health care.mp.
 37 community mental health care.mp.
 38 (family adj pract\$).mp.
 39 (family adj doctor\$).mp.
 40 (general adj pract\$).mp.
 41 (ambulatory adj care).mp.
 42 ambulatory health care.mp.
 43 community health.mp.
 44 primary care.mp.
 45 primary health care.mp.
 46 private pract\$.mp.
 47 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35
 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46
 48 random\$.mp.
 49 ((singl\$ or doubl\$ or trebl\$ or tripl\$) adj25 (blind\$ or dummy
 or mask\$)).mp.
 50 placebo\$.mp.
 51 crossover.mp.
 52 assign\$.mp.

Table 3. PsycInfo search strategy (Continued)

53 allocat\$.mp.	
54 ((clin\$ or control\$ or compar\$ or evaluat\$ or prospectiv\$) adj25 (trial\$ or studi\$ or study)).	
55 exp placebo/	
56 exp treatment effectiveness evaluation/	
57 exp mental health program evaluation/	
58 exp experimental design/	
59 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58	
60 animal.po.	
61 (human or inpatient or outpatient).po.	
62 60 and 61	
63 60 not 62	
64 59 not 63	
65 24 and 47 and 64	

Table 4. CINAHL search strategy

Terms	
1 exp COUNSELING/	
2 exp Psychotherapy/	
3 counsel\$.mp.	
4 supportive therapy.mp.	
5 humanistic.mp.	
6 client centred.mp.	
7 client orientated.mp.	
8 client centered.mp.	
9 non-directive.mp.	
10 nondirective.mp.	

11 experiential.mp.
 12 insight oriented.mp.
 13 insight orientated.mp.
 14 client oriented.mp.
 15 person centred.mp.
 16 person centered.mp.
 17 person oriented.mp.
 18 person orientated.mp.
 19 nonprescriptive.mp.
 20 non prescriptive.mp.
 21 non-prescriptive.mp.
 22 rogerian.mp.
 23 client orientated.mp.
 24 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13
 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23
 25 exp Ambulatory Care/
 26 exp Community Health Services/
 27 exp Community Mental Health Centers/
 28 exp Family Practice/
 29 exp Primary Health Care/
 30 exp Private Practice/
 31 (ambulatory adj care).mp.
 32 (ante-natal adj care).mp.
 33 (antenatal adj care).mp.
 34 ante-natal clinic.mp.
 35 antenatal clinic.mp.
 36 community health care.mp.
 37 community mental health care.mp.
 38 (family adj pract\$).mp.
 39 (family adj doctor\$).mp.
 40 (general adj pract\$).mp.
 41 (ambulatory adj care).mp.
 42 ambulatory health care.mp.
 43 community health.mp.
 44 primary care.mp.
 45 primary health care.mp.

Table 4. CINAHL search strategy (Continued)

46 private pract\$.mp.	
47 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or	
36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46	
48 clinical trial.pt.	
49 exp Clinical trials/	
50 (clin\$ adj25 trial\$).ti,ab.	
51 ((singl\$ or doubl\$ or tripl\$ or trebl\$) adj25 (blind\$ or mask\$ or dummy\$)).mp.	
52 placebos.sh.	
53 placebo\$.ti,ab.	
54 random\$.ti,ab.	
55 exp evaluation studies/	
56 prospective studies.sh.	
57 (control\$ or prospectiv\$ or volunteer\$).ti,ab.	
58 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57	
59 24 and 47 and 58	

Table 5. CENTRAL search strategy

Terms	
Counsel+ in all fields	
And	
(General Pract* in all fields) or (primary care in all fields)	

Table 6. CCDAN register search strategy

Terms	
CCDANCTR-Studies	
Intervention = counseling	
Setting = General practice or primary care	
CCDANCTR-References	
Free text = Counsel*	
Free text = ("general pract*" or "primary care")	
1 exp COUNSELING/	21 non-prescriptive.mp.
2 exp Psychotherapy/	22 rogerian.mp.
3 counsel\$.mp.	23 client orientated.mp.
4 supportive therapy.mp.	24 combine 1-23
5 humanistic.mp.	25 exp Ambulatory Care/
6 client centred.mp.	26 exp Community Health Services/
7 client orientated.mp.	27 exp Community Mental Health Centers/
8 client centered.mp.	28 exp Family Practice/
9 non-directive.mp.	29 exp Primary Health Care/
10 nondirective.mp.	30 exp Private Practice/
11 experiential.mp.	31 (ambulatory adj care).mp.
12 insight oriented.mp.	32 (ante-natal adj care).mp.
13 insight orientated.mp.	33 (antenatal adj care).mp.
14 client oriented.mp.	34 ante-natal clinic.mp.
15 person centred.mp.	35 antenatal clinic.mp.
16 person centered.mp.	36 community health care.mp.
17 person oriented.mp.	37 community mental health care.mp.
18 person orientated.mp.	38 (family adj pract\$).mp.
19 nonprescriptive.mp.	39 (family adj doctor\$).mp.
20 non prescriptive.mp.	40 (general adj pract\$).mp.
	41 (ambulatory adj care).mp.

42 ambulatory health care.mp.
 43 community health.mp.
 44 primary care.mp.
 45 primary health care.mp.
 46 private pract\$.mp.
 47 combine 25-46
 48 randomized-controlled-trial.pt.
 49 controlled clinical trial.pt.
 50 randomized controlled trials.sh.
 51 random allocation.sh.
 52 double blind method.sh.
 53 single blind method.sh.
 54 clinical trial.pt.
 55 exp Clinical trials/
 56 (clin\$ adj25 trial\$).ti,ab.
 57 ((singl\$ or doubl\$ or tripl\$ or trebl\$) adj25 (blind\$ or mask\$ or dummy\$)).mp.
 58 placebos.sh.
 59 placebo\$.ti,ab.
 60 random\$.ti,ab.
 61 research design.sh.
 62 comparative study.sh.
 63 exp evaluation studies/
 64 follow up studies.sh.
 65 prospective studies.sh.
 66 (control\$ or prospectiv\$ or volunteer\$).ti,ab.
 67 combine 48-66
 68 (animals not human).sh.
 69 67 not 68
 70 24 and 47 and 69
 71 exp Family Practice/
 72 limit 71 to yr=1966 - 1995
 73 exp Primary Health Care/
 74 limit 73 to yr=1966 - 1995
 75 (primary adj care).mp.
 76 limit 75 to yr=1966 - 1995

77 72 or 74 or 76
 78 exp COUNSELING/
 79 limit 78 to yr=1966 - 1995
 80 exp PSYCHOTHERAPY/
 81 limit 80 to yr=1966 - 1995
 82 exp PSYCHOTHERAPY/
 83 exp Psychology, Clinical/
 84 limit 83 to yr=1966 - 1995
 85 79 or 81 or 83
 86 77 and 85
 87 70 not 86

Data collection and analysis

Trial selection

A reviewer (PB) screened the abstracts of all publications obtained by the updated searches, and judged eligibility from the abstract or the full paper as required. Disagreement about whether a trial should be included was resolved by discussion between the reviewers. Where required, authors were contacted for further information.

Data extraction

Data were entered on specially designed data extraction forms by two reviewers independently (NR and PB). The data on the forms were collated onto a third form; disagreements were discussed by the reviewers. The collated data were then entered into the RevMan software. Missing information was obtained from authors wherever possible.

Trials excluded from the review were listed in the 'excluded trials' section together with their reason for exclusion.

Quality rating

Each study was critically appraised by two independent reviewers (NR and PB) using standard data extraction forms. Their reports were compared and disagreements resolved by discussion.

The 'quality' of a trial can be defined as the extent to which its design and conduct are likely to have prevented systematic errors or bias. Various scales and checklists exist to assess the quality of RCTs. Criteria for assessing methodological quality fall into four general categories: protection against selection, performance, exclusion and detection biases. Because there is no gold standard for the 'true' methodological quality of a trial, such scales must be used with caution. The reviewers assessed the methodological quality of the included trials using the CCDAN Quality Rating Scale (QRS). The QRS consists of 23 items, including questions on sample size, allocation, use of diagnostic criteria, compliance, attrition and statistical analysis. Designed for use in secondary care, the scale required adaptation for use with pragmatic trials

in primary care. The items on blinding of subjects and assessors were excluded. Blinding of patients to active interventions such as counselling is not possible, and all trials used self-report measures for outcomes which made blinding of assessors less relevant. The question on side effects of treatment was also considered less relevant for non-drug studies.

Each item was scored 0, 1 or 2, which gives a score of between 0 and 40 for the revised version of the scale. There was no specific cut off QRS score used for inclusion of the study in the review. However, the ratings on one item (concealment of allocation) were used in sensitivity analyses (see below).

1. Objectives

0 = objectives unclear

1 = objectives clear but main outcome not a priori

2 = objectives clear and main outcome a priori

2. Sample size

0 = < 50 per group

1 = 51-100 per group

2 = > 100 per group

3. Duration of trial and follow-up

0 = < 3 months

1 = > 3 months and < 6 months

2 = > 6 months

4. Power

0 = not reported

1 = mentioned without details

2 = details of calculation provided

5. Method of allocation

0 = unrandomised and likely to be biased

1 = partial or quasi-randomised with bias possible

2 = randomised allocation

6. Concealment

0 = not done or not reported

1 = partial concealment reported

2 = done adequately

7. Description of treatment

0 = main treatments not clearly described

1 = inadequate details of main or adjunctive treatments

2 = full details of main or adjunctive treatments

8. Blinding of subjects

0 = not done

1 = done, but no test of blind

2 = done and integrity of blind tested

9. Source of subjects, representativeness of sample

0 = source of subjects not described

1 = source of subjects but unrepresentative

2 = source of subjects plus representative sample

10. Diagnostic/inclusion criteria

0 = none

1 = diagnostic criteria or clear inclusion criteria

2 = diagnostic criteria and specification of severity

11. Record of exclusion criteria, exclusions, refusals

0 = criteria and number not reported

1 = criteria or number not reported

2 = criteria and number reported

12. Description of sample demographics

0 = little/no info (only age/sex)

1 = basic details (marital status/ethnicity)

2 = full description (socio-economic status/clinical history)

13. Blinding of assessor

0 = not done

1 = done but no test of blind

2 = done and integrity of blind tested

14. Compliance /attendance for therapy

0 = not assessed

1 = assessed for some experimental treatments

2 = assessed for all experimental treatments

15. Details on side effects

0 = inadequate details

1 = recorded by group but details inadequate

2 = full side effect profiles by group

16. Record of number/reasons for withdrawal by group

0 = no information on withdrawals by group

1 = withdrawals by group without reason

2 = withdrawals and reason by group

17. Outcome measures/use of validated instruments

0 = outcomes not described clearly

1 = some outcomes not clearly described

2 = outcomes described and valid/reliable

18. Group comparability and adjustment in analysis

0 = no information on comparability

1 = some information with adjustment

2 = sufficient information with adjustment

19. Inclusion of withdrawals in analysis (ITT)

0 = not included or reported

1 = withdrawals included by estimation of outcome

2 = withdrawals followed up and included in analysis

20. Results presented with data for re-analysis

0 = inadequate presentation

1 = adequate

2 = comprehensive

21. Appropriate statistical analysis

0 = inappropriate

1 = mainly appropriate

2 = appropriate and comprehensive

22. Conclusions justified

0 = no

1 = partially

2 = yes

23. Declaration of interests

0 = No

2 = Yes

Data analysis

Clinical effectiveness data were analysed using Revman software.

Generally trials reported multiple outcomes, so the analysis either used the identified primary outcome measure within each trial, or the reviewers selected the optimal (i.e. most widely used and validated) measure of anxiety and depression symptoms, which make up the bulk of symptoms in patients in primary care (Goldberg 1992, Goldberg 1987). Only one trial imputed values for missing data and thus the data used in the review were the scores of patients who successfully completed follow-up. An overall estimate of treatment effect was calculated for each outcome with 95% confidence intervals (negative estimates represent results favouring counselling).

All outcomes used in the analysis were measured on continuous scales, but different studies used different outcome measures. In order to provide an overall measure of treatment effect, all data (even from identical outcome measures) were translated to a standardised mean difference by dividing the difference in mean values between treatment and control group by the pooled standard deviation. Short-term (1-6 months), long-term (7-12 months) and very long-term data (> 12 months) were analysed separately. The primary analysis used a fixed-effect model, but the data were also analysed using random-effects models as a check on the findings. Heterogeneity was assessed to examine whether the variation in treatment effect between trials was greater than that expected by sampling variation alone (Sutton 1998). The assessment included the chi-squared test for heterogeneity (with its degrees of freedom and P-value) and the I-squared statistic measuring the extent of inconsistency among results. Sensitivity analyses were undertaken to test the robustness of the results. Publication bias could not be examined using funnel plot methods (Sutton 2000) because of the small number of trials. Data were analysed by PB.

Each economic analysis was described narratively using a structured format which detailed analysis type (e.g. descriptive, cost minimisation, cost effectiveness, cost utility), utilisation data, outcome data, duration of follow up, and the main results. In this section, analyses by the study authors are described in the text as originally reported. The first author has completed an economic analysis using individual patient data from some of the included studies. However, this was an exploratory analysis. The published results of that individual patient data analysis were reported along with the individual study results.

RESULTS

Description of studies

See: [Characteristics of included studies](#); [Characteristics of excluded studies](#).

Eight trials were included in the review (Boot 1994, Harvey 1998, Hemmings 1997, Friedli 1997, King 2000, Simpson 2000, Chilvers 2001, Barrowclough 2001) which were described in 15 separate publications.

The included trials list details the characteristics of the trials, including methodological quality, the characteristics of participants, the characteristics of interventions and outcome measures.

Risk of bias in included studies

1. Objectives. Three trials scored maximum of two because the objectives were clear and a single main outcome measure was identified a priori (Friedli 1997, King 2000, Simpson 2000). One trial identified multiple main outcome measures (Chilvers 2001).
2. Sample size. All trials scored one (51-100 patients per group).
3. Length of follow up. All but two trials scored a maximum of two for follow up of greater than six months, except two trials (Harvey 1998, Boot 1994).
4. Power calculation. All but two trials (Boot 1994, Barrowclough 2001) reported a power calculation.
5. Random allocation. All trials scored a maximum two points for attempting random allocation.
6. Concealment of allocation. Most trials reported the use of satisfactory methods (e.g. sealed opaque envelopes or central randomisation by an independent third party). However, two trials (Boot 1994, Hemmings 1997) reported problems with concealment of allocation. In the first trial (Boot 1994), random allocation was done using a card, which contained details of the randomisation schedule, which was computer generated. Consenting patients were entered into the study and then randomly allocated to treatment or control by the GP peeling a sticker from the patient allocation card to reveal allocation. Patient numbers and study allocation were documented on duplicate cards at a university site to ensure that GPs were adhering to the randomisation procedure. The authors reported that one GP had problems with the allocation procedure but that this was corrected. Shortened data collection and an imbalance in the computer allocation at the beginning of the random sequence meant an overall imbalance in the number of patients allocated to each group (twice as many patients were allocated to counselling as opposed to GP care). Further analysis revealed that despite the numerical imbalance in the groups, no significant differences were found in terms of age, sex, social class, presenting problems, psychotropic drug use or psychological disturbance measured by the GHQ. It is possible that concealment of allocation may have been compromised. In the second trial (Hemmings 1997), GPs opened a sealed random selection envelope containing either a counselling or control slip, in a ratio of 2:1. However, the actual ratio of allocation at the end of the study was 2.85:1. One GP's patients were excluded from the study after he or she referred nine subjects to the counselling arm and only one to routine treatment (a chance referral ratio of more than 6:1 was considered unlikely). Again, it is possible that concealment of allocation may have been compromised.
7. Description of treatment. Most trials reported details of the main treatments, but only three (King 2000, Simpson 2000, Barrowclough 2001) scored maximum because of the detail provided about the GP care or comparison condition.

8. Blinding of subjects. This item was excluded as it was not relevant to the trials under review.

9. Source of subjects and representativeness of sample. In all cases volunteer practices were used for recruitment (even when a random sample were approached). However, no studies were able to provide information on the number of eligible patients who were not asked to enter the study, which limits certainty about representativeness. All trials therefore scored identically on this item.

10. Diagnostic/inclusion criteria. Only two trials used specific diagnostic criteria (Chilvers 2001, Barrowclough 2001). In so far as pragmatic trials of counselling in primary care aim to replicate routine clinical conditions, a range of patients with a range of problems may be referred for counselling (many of whom will not have a psychiatric diagnosis). Thus our interpretation of this item focuses on inclusion, rather than diagnostic criteria. Only four trials were judged to have given clear inclusion criteria and specification of severity (King 2000, Simpson 2000, Chilvers 2001, Barrowclough 2001).

11. Record of exclusion criteria, exclusions, refusals. Four trials (Friedli 1997, King 2000, Simpson 2000, Barrowclough 2001) were judged to have provided detailed information on both the criteria and number of exclusions.

12. Sample demographics. Only four trials (King 2000, Simpson 2000, Chilvers 2001, Barrowclough 2001) were considered to have given a full description, including socio-economic status and clinical history.

13. Blinding of the assessor. This item was excluded as almost all trials utilised self-report measures as their main outcomes.

14. Compliance/attendance for therapy. Two trials (Boot 1994, Chilvers 2001) failed to report the number of counselling sessions attended by patients.

15. Details on side effects. This item was excluded as it was considered not relevant to non-medication trials.

16. Records of withdrawals by group. Having addressed the issue of compliance in item 14, this question was interpreted as withdrawals from the trial (i.e. attrition). All trials scored the same as all provided information on withdrawals without reasons for withdrawal.

17. Validated outcome measures. All trials scored maximum as all were judged to have used at least one valid and reliable measure.

18. Group comparability and adjustment in the analysis. All trials provided information on comparability but only four (King 2000, Simpson 2000, Chilvers 2001, Barrowclough 2001) were judged to have provided sufficient information and made adequate adjustment for baseline differences.

19. Inclusion of withdrawals in the analysis intention-to-treat (ITT). This was judged to refer to the inclusion of patients who did not attend for treatment, not patients who failed to be followed up for the purposes of research assessment. All trials scored maximum as none removed patients who had not taken up the offer of the counselling treatment (although Barrowclough 2001 excluded patients who dropped out during a pre-treatment base-

line period).

20. Results presented with data for re-analysis. All trials scored maximum except two (Harvey 1998, Hemmings 1997) where further information was sought in order to carry out the analysis.

21. Appropriate statistical analysis. Three trials (Boot 1994, Hemmings 1997, Harvey 1998) were judged to be mainly appropriate. The remaining trials scored maximum points on this item.

22. Conclusions justified. This was considered to be the case in all included trials.

23. Declaration of interests. All authors were judged to have declared relevant interests.

Twenty items were scored, each with a maximum of two points. The scores were as follows:

(Boot 1994) 23

(Harvey 1998) 26

(Hemmings 1997) 27

(Chilvers 2001) 32

(Friedli 1997) 33

(King 2000) 37

(Simpson 2000) 37

(Barrowclough 2001) 34

Items on the QRS are not weighted. However, some are more likely to be associated with significant bias than others. For example, concealment of allocation is generally regarded as crucial to the validity of controlled trials, whereas length of follow up is a relevant quality issue, but is not theoretically related to bias. Given the importance of quality of the randomisation, it was considered crucial that the randomisation procedure may have been compromised in two trials (Boot 1994, Hemmings 1997). Therefore the effects of the inclusion and exclusion of these trials were examined in sensitivity analysis.

Effects of interventions

Types of practitioner

A range of practitioners offered a range of counselling interventions. In seven of the trials, all the professionals had the necessary qualifications and experience to be accredited by the BACP (Boot 1994, Harvey 1998, Hemmings 1997, Friedli 1997, King 2000, Simpson 2000, Barrowclough 2001). In one trial, it was not clear whether all the included counsellors met the criteria for BACP accreditation (Chilvers 2001), although correspondence with the authors indicated that a significant proportion did, and all were highly experienced. This trial also included a comparison group other than usual care (see below), and this trial was initially excluded from the analysis of counselling versus 'usual care' and the effect of its inclusion examined in sensitivity analysis.

Types of intervention

The interventions offered were broadly compatible with the BACP definition of counselling. All trials described therapeutic interventions with individual clients involving face to face contact between patient and counsellor. Although there were differences in

the therapeutic models used (e.g. non-directive counselling, psychodynamic counselling, cognitive-behavioural counselling), the interventions were considered homogenous for the purposes of analysis.

Types of patients

Two trials restricted entry to patients meeting a certain level of severity on the Beck Depression Inventory (King 2000, Simpson 2000) and one to patients outside the normal range on the Beck Anxiety Inventory (Barrowclough 2001). Most trials were limited to adult patients, but one trial was further restricted to anxious older adults aged 55 or over (Barrowclough 2001).

In one trial (Simpson 2000), poor recruitment meant that patients were screened in surgery waiting rooms rather than referred by the GP. It is possible that these patients would differ from those in the other trials, possibly having lower levels of distress (although this was one of the trials that used a severity criterion) and lower motivation for treatment. In addition, this trial specifically recruited patients with chronic problems, defined as problems of six months or more. Some of the other trials included a mix of acute and chronic problems, although two specifically excluded chronic patients (Boot 1994, Friedli 1997). As no data were available on the exact mix of acute and chronic patients in each trial, it was impossible to determine if the patients in the Simpson trial were qualitatively different. The effect of the exclusion of this trial was therefore examined in sensitivity analysis.

Types of comparison group

The comparison group in one trial was GP antidepressant treatment, as opposed to usual care (Chilvers 2001). GPs were given guidelines concerning appropriate antidepressant treatment. There were no data available concerning the magnitude of the differences between GP management of patients in this group and 'usual care', although correspondence with the authors suggested that the former involved higher rates of antidepressant use than usual care, and also involved the expectation of antidepressants on the part of both patients and GPs. As stated above, this trial was initially excluded from the analysis of counselling versus 'usual care' and the effect of its inclusion examined in sensitivity analysis. Two trials reported comparisons of counselling with cognitive-behavioural therapy (King 2000, Barrowclough 2001). One study examined adults with depression and mixed anxiety and depression (King 2000), while the second was restricted to older adults with anxiety diagnoses (Barrowclough 2001). These trials were treated separately in the analysis.

Mental health outcomes

There were six trials reporting short-term outcomes and utilising 'usual care' as a comparison. Patients receiving counselling had significantly lower psychological symptom scores than patients receiving 'usual care' (overall standardised mean difference -0.28, 95% CI -0.43 to -0.13, $n = 772$). The effect size was slightly reduced when the study using GP antidepressant treatment was included (overall standardised mean difference -0.24, 95% CI -0.38 to -0.10, $n = 855$). The results were similar when the two

trials with inadequate allocation procedures were excluded (overall standardised mean difference -0.27, 95% CI -0.45 to -0.09, $n = 510$). The superiority of counselling rose in magnitude when the one study examining chronic patients only was excluded (overall standardised mean difference -0.36, 95% CI -0.53 to -0.19, $n = 611$) and when the inadequate allocation and chronic patient trials were all excluded (overall standardised mean difference -0.41, 95% CI -0.62 to -0.19, $n = 349$). When the trial with chronic patients was considered alone, counselling was no more effective than usual care (overall standardised mean difference 0.00, 95% CI -0.31 to 0.31, $n = 161$).

There were four trials reporting long-term outcomes and utilising 'usual care' as a comparison. Patients receiving counselling did not differ in psychological symptom scores compared to patients receiving 'usual care' (overall standardised mean difference -0.09, 95% CI -0.27 to 0.10, $n = 475$). The results were similar when the study using GP antidepressant treatment was included (overall standardised mean difference -0.05, 95% CI -0.23 to 0.12, $n = 540$), when the trial with inadequate allocation was excluded (overall standardised mean difference -0.10, 95% CI -0.31 to 0.10, $n = 375$), when the study examining chronic patients only was excluded (overall standardised mean difference -0.11, 95% CI -0.34 to 0.11, $n = 332$) and when the inadequate allocation and chronic patient trials were both excluded (overall standardised mean difference -0.15, 95% CI -0.40 to 0.11, $n = 232$). When the trial with chronic patients was considered alone, counselling was no more effective than usual care (overall standardised mean difference -0.03, 95% CI -0.36 to 0.30, $n = 143$).

There was one trial reporting very long term outcomes (Simpson 2000). This trial included chronic patients only. Patients receiving counselling did not differ in terms of lower psychological symptom scores than patients receiving 'usual care' (overall standardised mean difference -0.03, 95% CI -0.41 to 0.34, $n = 109$).

In the single trial comparing counselling with GP antidepressant treatment, there were no significant differences in outcome in either the short (standardised mean difference 0.04, 95% CI -0.39 to 0.47, $n = 83$) or long-term (standardised mean difference 0.17, 95% CI -0.32 to 0.66, $n = 65$).

One trial compared counselling with cognitive-behaviour therapy in depressed patients. There were no significant differences in outcome either in the short (standardised mean difference -0.02 95% CI -0.28 to 0.24, $n = 229$) or long-term (standardised mean difference 0.13, 95% CI -0.14 to 0.41, $n = 209$). One trial compared counselling with cognitive-behaviour therapy in anxious older patients. There were no significant differences in outcome in the short term (standardised mean difference 0.53 95% CI -0.09 to 1.14, $n = 43$), long term (standardised mean difference 0.47 95% CI -0.18 to 1.12, $n = 39$) or very long term (standardised mean difference 0.49, 95% CI -0.16 to 1.14, $n = 39$).

Three trials reported social function outcomes using the same social function measure (Cooper 1982). Patients receiving counselling did not differ in overall social function compared to pa-

tients receiving 'usual care' at either short-term (overall standardised mean difference -0.09, 95% CI -0.29 to 0.11, n = 386), long-term (overall standardised mean difference -0.12, 95% CI -0.33 to 0.08, n = 369) or very long term (overall standardised mean difference -0.18, 95% CI -0.56 to 0.20, n = 109).

The results of the random-effects models were similar to the fixed-effects analyses in terms of the magnitude of the treatment effect and statistical significance.

None of the tests for heterogeneity were significant at the $P < 0.05$ level, although the significance level was 0.09 for the analysis of short-term outcomes in studies comparing counselling and 'usual care' (comparison 1) and 0.08 for the sensitivity analysis where the comparison of short-term outcomes in studies comparing counselling and 'usual care' included the GP antidepressant trial (comparison 2). The low power of tests of heterogeneity (Sutton 1998) suggests some caution in the interpretation of the aggregated results, although it should be noted that the variation concerns the size of the treatment effect rather than its direction. Some heterogeneity remained in the short-term effects after the exclusion of the poor quality studies (comparison 3, $P = 0.10$). There was also evidence of heterogeneity in the analysis of long-term effects on psychological symptoms (excluding the trials with inadequate allocation and the chronic patient trial, comparison 11, $P = 0.06$), and social function (comparison 7, outcome 2, $P = 0.06$).

Economic outcomes

Each economic analysis is described according to the following criteria: analysis type (e.g. utilisation data only, costing, cost effectiveness, cost utility); the type of utilisation data collected; outcome measures; duration of follow up; and results (including sensitivity analyses).

Boot 1994

Analysis type: Health service utilisation only

Utilisation data: Psychotropic drugs, antidepressants, anxiolytics, referrals to outside agencies for psychiatric or psychological help, GP consultation rates.

Outcome data: Not applicable.

Duration of follow up: Six weeks.

Results: The counselled group were prescribed significantly fewer psychotropic drugs during the six week trial period than the usual care group (counselled patients, n = 17/107 (16%); usual care, n = 19/60 (32%); chi squared = 4.8; df = 1, $P = 0.029$). The counselled group were prescribed less anti depressants (counselled patients, n = 10/107 (9%); usual care n = 14/60 (23%); chi squared = 5; df = 1; $P = 0.02$). No difference was found between groups in the prescription of anxiolytic drugs (counselled patients, n = 6 (9%); usual care n = 3 (8%); Fisher's exact test, $P = 0.28$). The usual care group received more referrals to outside agencies for psychiatric or psychological help (counselled group n = 4/107 (4%); GP advice group n = 38/60 (63%); chi squared = 69.4; df = 1; $P = 0.000$). No difference was found between groups in GP consultation rates (counselled group 54/107 (51%); usual care 39/60 (65%); chi squared = 2.7, df = 1; $P = 0.1$).

Hemmings 1997

Analysis type: Health service utilisation only

Utilisation data: Psychotropic drugs, referrals to outside agencies for psychiatric or psychological help

Outcome data: Not applicable

Duration of follow up: Four months

Results: 34/116 (25%) of the counselled group received psychotropic medication, compared with 17 (33%) of the usual care group. Half the counselled group either stopped or reduced their medication at four month follow up. In the usual care group, 18/52 (34%) patients had one consultation, 17 (33%) were referred to external agencies, and six (35%) of whom had been referred to psychiatric services.

Harvey 1998

Analysis type: Cost minimisation

Utilisation data: medication, primary care and counsellor staff time, and referral to other health care services

Outcome data: As there were no differences in outcomes, cost data were not linked to outcomes

Duration of follow up: Four months

Results: Excluding referral data, costs in the counselled group were £67.09 and in the usual care group £57.87. When all referrals were included, costs were £71.21 - £81.23 in the counselled group and £89.67 - £109.51 in the usual care group. Sensitivity analysis examined different methods of estimating referral costs (e.g. inclusion and exclusion of private referrals). When only mental health referrals were included, costs were £68.15 - £74.43 in the counselled group and £67.32 - £83.91 in the usual care group.

Friedli 1997

Analysis type: Cost minimisation

Utilisation data: primary care and counsellor staff time, referral to other health care services, days lost from work, travel and child-care. Medication costs were included in the estimates of GP consultation costs.

Outcome data: As there were no differences in outcomes, cost data were not linked to outcomes.

Duration of follow up: Three months and nine months.

Results: At three months, patients in the usual care group tended to increase their visits, whereas the counselled group decreased their visits to the doctor ($P = 0.053$). At nine months, there were no differences between groups. No differences were found between the groups in the prescription of antidepressants at three months (counselled group 10, usual care group 12). At nine months, there were no significant differences in total direct costs (counselled group were £308.63, usual care group £474.30). At nine months, there were no significant differences in total indirect costs (counselled group £808.70, usual care group £468.50). At nine months, there were no significant differences in total overall costs (counselled group £1191.27, usual care group £963.33). Sensitivity analysis examined the effects of variation in GP and counsellor unit costs.

King 2000

Analysis type: Cost effectiveness and cost minimisation.

Utilisation data: primary care and counsellor staff time, medication costs, referral to other health care services, days lost from work, travel and childcare.

Outcome data: Beck Depression Inventory.

Duration of follow up: Four and twelve months.

Results: At four months, total direct costs for the counselled group were £257.5 (standard deviation (sd) 356.7), for the cognitive-behaviour therapy group £215.5 (sd 108.6) and for the usual care group £244.0 (sd 597.5). At four months, indirect costs were £444.4 (sd 1127.2), £286.1 (sd 701.3) and £383.7 (sd £1194.3) respectively. At four months, there were no significant differences in total overall costs (counselled group £701.9 (sd 1228.4); cognitive-behaviour therapy group £501.6 (sd 715.3), usual care group £627.7 (sd 1359.8)). At 12 months, total direct costs for the counselled group were £501.4 (sd 614.8), for the cognitive-behaviour therapy group £448.9 (sd 471.6) and for the usual care group £472.9 (sd 779.3). At 12 months, indirect costs were £897.2 (sd 2336.1), £1060.5 (sd 1471.1) and £1217.6 (sd 2013.0) respectively. At 12 months, there were no significant differences in total overall costs (counselled group £1398.6 (sd 2474.1); cognitive-behaviour therapy group £1060.5 (sd 1471.1), usual care group £1217.6 (sd 2013.0)). Sensitivity analysis examined the effects of variation in costs of psychological therapy, inclusion of non-attendances at appointments, use of a national wage rate in the calculation of indirect costs, and restriction of the analysis to patients with complete data

[Simpson 2000](#)

Analysis type: Cost minimisation.

Utilisation data: primary care and counsellor staff time, medication costs, referral to other healthcare services, social care and criminal justice services.

Outcome data: As there were no differences in outcomes, cost data were not linked to outcomes.

Duration of follow up: Six and twelve months.

Results: At six months, total service costs in the counselled group were £633 (sd 1152) and in the usual care group £513 (sd 867), mean difference £121, 95% CI -428 to 198. In the period between 6 and 12 months, costs in the counselled group were £384 (sd 520) and in the usual care group £469 (sd 836), mean difference £86, 95% CI -149 to 352.

[Chilvers 2001](#)

Analysis type: Cost effectiveness, using net mean benefit statistics and cost effectiveness acceptability curves.

Utilisation data: depression-related health services resources, including all GP consultations, drugs, use of GP-arranged counselling, and hospital psychiatric outpatient and inpatient visits.

Outcome data: psychiatrists blind rating of global outcome (as a dichotomy), based on Research Diagnostic Criteria, BDI and data in the GP notes.

Duration of follow up: 12 months.

At 12 months, there were no significant differences in total depression related health services costs (counselled group £301.63 standard error (SE) 37.72, antidepressant group £343.64, SE 61.87). The probability that antidepressants were more cost effective was 0.75 when one good outcome was valued at £500, and 0.9 when one good outcome was valued over £2000. Sensitivity analysis examined the effects of imputing values for randomised patients with missing outcome data.

[Bower 2003](#)

Analysis type: Cost effectiveness, based on individual patient data meta-analysis ([Harvey 1998](#), [Friedli 1997](#), [King 2000](#) and [Simpson 2000](#)), using net mean benefit statistics and cost effectiveness acceptability curves.

Utilisation data: GP consultations, psychotropic medication, referrals (inpatient psychiatry, outpatient psychiatry, practice-based psychological therapy, community and voluntary psychological therapy providers).

Outcome data: BDI.

Duration of follow up: short term and long term.

In the short term, the mean difference in total direct costs between counselled patients and those in 'usual care' was £92, 95% CI 57 to 126. In the long term, the mean difference in total direct costs between counselled patients and those in 'usual care' was £110, 95% CI 38 to 182. The incremental cost-effectiveness ratio for counselling compared to 'usual care' in the short-term was £50 per one point improvement on the BDI. The probability that counselling was cost effective in the long term was over 50% when a reduction of one point on the BDI was valued at £196, and was 69% when a reduction of one point on the BDI was valued at £2000. Sensitivity analysis examined duration of GP consultations and costs of psychological therapy.

Satisfaction outcomes

Five trials included measures of patient satisfaction ([Boot 1994](#), [Hemmings 1997](#), [Friedli 1997](#), [King 2000](#), [Chilvers 2001](#)), although one only compared satisfaction between randomised and preference patients ([Chilvers 2001](#)).

Two trials reported generally high levels of satisfaction with counselling treatments but did not compare satisfaction with 'usual care' directly. The first ([Hemmings 1997](#)) used the Counselling Satisfaction Questionnaire ([Corney 1984](#)) to assess levels of satisfaction for counselled patients. One hundred thirty two patients received counselling and 96 completed questionnaires. The majority (82%) felt that counselling had been helpful; that they had been understood (80%); been given enough time (83%) and that the counsellor had been easy to talk to (75%). The second trial ([Boot 1994](#)) found that 67/124 patients in the counselling group and 32/68 patients in the 'usual care' group completed questionnaires at six weeks post intervention, soliciting their views of treatment. Significantly more of those patients in the counselled group reported that they were satisfied with their treatment and had enough time to talk.

Two trials ([Friedli 1997](#), [King 2000](#)) used a multi-item question-

naire to compare patient satisfaction with counselling and 'usual care' directly, and both found higher levels of satisfaction in the counselling group at short and long-term follow-up.

DISCUSSION

The updated review added only three studies, two of which were additional analyses of studies already included in the review. There were no major changes to the overall conclusions of the review.

In summary, there is evidence that counselling is more effective than usual care in terms of mental health outcomes in the short term. However, these advantages do not endure in the longer term. Counselling may not differ in effectiveness from medication and cognitive-behavioural therapy, although the standardised mean difference in outcomes between cognitive-behavioural therapy and counselling in older patients with anxiety was relatively large. Counselling may be associated with some reductions in health service utilisation, but overall costs did not seem to be reduced, and may be increased. Patients are generally satisfied with counselling in primary care.

Issues of relevance to the interpretation of the review are considered below.

Types of patients

Clinical diagnosis was not a factor in selecting and recruiting patients to the bulk of the pragmatic trials included in this review. It has been argued that studies such as these are lacking because they do not confirm caseness or diagnosis, since outcomes cannot be divorced from the natural history of a condition (Hughes 1998). While it is possible that interventions targeted to a specific client group may be more likely to demonstrate positive outcomes (Roth 1996), such trials may not accurately reflect how counselling is used in primary care. GPs may be more likely to consider the frequency and severity of symptoms or problems than diagnosis, when treating or referring patients (King 1998).

GPs were encouraged to recruit all patients they considered suitable for counselling, but they may have been reluctant to recruit some patients to the study, and authors reported that gathering information on such patients from GPs is difficult (King 2000, Harvey 1998, Friedli 1997). While it is inappropriate to assume that patients participating in these trials were representative of eligible patients generally, all the included trials used similar procedures, so they can reasonably be combined. Nevertheless, caution must be exercised when generalising the results to the wider population of patients in primary care.

Types of interventions

There is a tension in the present review between the international nature of a Cochrane review, and the topic of 'counselling in primary care', which has developed largely within the context of UK

health care. The use of definitions of counselling and accreditation criteria based on a single national organisation creates a number of difficulties. First, the results of the review may not be generalisable to other healthcare contexts. Second, it is not clear whether the inclusion criteria developed for the review will be appropriate if trials are identified from other countries. Finally, the inclusion or exclusion of particular therapies has not been made on the basis of empirically justified and replicable criteria and the uniformity of the interventions cannot be demonstrated. For example, a therapist in one trial (Hemmings 1997) was reported as having trained in cognitive-analytic therapy, which is not generally seen as a mainstream form of counselling. However, the counsellors in this trial did meet the BACP criteria and the author confirmed that the interventions offered were consistent with the BACP definition of counselling.

There is no simple answer to this problem. At present, the literature on counselling in primary care is largely restricted to the United Kingdom, as studies in the United States have tended to focus more on defined therapies such as cognitive-behavioural therapy and interpersonal therapy. It is possible that future versions of this review will use a more theoretically justified definition of 'counselling' that may be more widely applicable. However, at present, the results of the review may only be applicable to the United Kingdom health care system.

None of the trials attempted to standardise 'usual care', and the GP interventions were monitored only from the perspective of gathering health service utilisation data. While some information about medication and referrals was available, there are no other details of the therapeutic encounter between GPs and their patients. Again, it is possible that GPs were offering a similarly sympathetic, listening approach and that the interventions of counsellors and GPs were very similar (Tylee 1998). A further criticism is that the absence of a no-treatment group makes it difficult to assess how many patients would have improved spontaneously, over time. However, despite the blurring of outcomes which results from comparing two active treatments, it is ethically and practically impossible to have a genuine no-treatment group in primary care (King 1998). This reflects the reality of conducting trials in clinical settings.

The practices and GPs recruited to the studies were 'volunteers' rather than a random sample. The doctors who participated may have been particularly interested in the research question and may have used therapeutic techniques to a greater extent than is usual, thus reducing the additional effect of counselling (Friedli 1997). In addition, in one trial (Hemmings 1997), GPs participated in an Action Learning programme, in which they learned about counselling and counselling skills. This may have effected their consultation style and referral practices.

Types of outcomes

Patients allocated to counselling tended to be satisfied with the help they receive from counsellors, and more satisfied than those

who remain under 'usual care'. However, satisfaction is not necessarily related to outcome, and satisfaction measures are open to social approbation errors i.e. a desire to please the therapist, and to be seen as a polite and courteous person (Hemmings 1997). The comparison of counsellors and GPs is also confounded with the time available to the two types of professionals: differences in satisfaction may be reduced or disappear entirely if both professionals were able to provide 50 minute sessions. However, patient satisfaction is increasingly seen as an important outcome in its own right. Although it should not be the sole determinant of whether a treatment is funded, it is an important factor in the decision making process.

The analysis of economic outcomes was complicated by the range of different analytic techniques used, ranging from simple analyses of health service utilisation through to net mean benefit calculations and cost effectiveness acceptability curves.

It has been suggested that counsellors working in primary care can lead to a reduction in health service utilisation, including fewer referrals to psychiatric services, fewer prescriptions and fewer GP consultations. Another Cochrane review which included some of the studies from the present review (Bower 2000) suggested that this may occur for mental health professionals generally, but that the effects are limited in scope and consistency. The current data reflected the findings of the wider review, as there was some evidence that modest reductions in health service utilisation did take place. Some studies suggested that the provision of counselling was not associated with increased costs, but such analyses are hampered by small sample sizes (Briggs 2000) and the finding of no differences in costs must be interpreted cautiously, particularly since the exploratory individual patient data meta analysis indicated that the costs associated with counselling may be higher, which supports the argument that previous analyses were underpowered to detect these effects. However, the interpretation of the cost effectiveness acceptability curve analyses is complex, because changes in outcomes such as Beck Depression Inventory scores are not as interpretable as conventional economic outcomes such as quality adjusted life years (QALYs).

A statistically significant outcome is one that is unlikely to have occurred by chance, but statistically significant change may leave a patient still more anxious and depressed than normal. A clinically significant outcome is one that reduces patient distress from one defined level to a qualitatively different one. For example, patient scores may move from a range associated with 'patients' to the range associated with 'normals', with the ranges based on relevant normative data. The current study used the effect size as a useful summary measure, which has also been used in major meta-analyses in the general psychotherapy literature (although the exact computations sometimes differ). Assuming that the scores of the treatment and control groups correspond to a normal distribution, effect sizes can be converted into percentiles (Roth 1996). The effect size of 0.28 found in comparison 1 in the present review is

relatively modest compared with previous meta-analyses, and indicates that the average treated patient had a score approximately at the 60th percentile of scores for the untreated group. If the treatment had no effect, the scores of the average treated patient would be at the 50th percentile of scores (Roth 1996).

AUTHORS' CONCLUSIONS

Implications for practice

Although the exact estimate of effect size depends on the trials included in the analysis, the results demonstrate some consistency in suggesting that counselling is significantly more effective in reducing psychological symptoms in the short-term, but appears to provide no additional advantage in the long-term. Corney (2005) suggests that it is not surprising that short term, time limited therapy has short term impact, and that longer initial treatment, maintenance treatments, booster sessions, or interventions aimed at improving social circumstances may bring about long-term improvement.

The results can only be generalised to similar patients and counsellors. This means that the evidence is restricted to counsellors with BACP accreditation or equivalent. Some of the trials have been restricted to patients with a certain level of disorder, such as a score of 14+ on the Beck Depression Inventory (King 2000, Simpson 2000). Such severity criteria are not routinely used in primary care.

Factors predicting which patients benefit most from counselling and other psychological therapies in primary care are not well understood at present. The United Kingdom Department of Health guidelines suggest that age, sex, social class and ethnicity should not determine access to psychological therapies such as counselling (DOH 2001).

The current evidence suggests that provision of counselling may make a useful addition to primary care services alongside other mental health treatments. Commissioners of services can use the information contained in this review to assist in decision making about current and future service provision.

Implications for research

Although pragmatic trials do not attempt to instigate the highest levels of experimental control, it is important that studies adequately describe the patients, treatments and other factors that are involved in the trial. For example, although 'patients suitable for counselling' is a pragmatic criterion for entry to a trial, it would still be helpful to provide information on all types of problems that were eventually referred (e.g. diagnoses). Equally, although treatments may not be highly standardised, it is important to know that treatments were distinct, which may require more extensive descriptive work (especially of the content of GP care) or the use

of validated rating scales of therapy content (King 2000). Data extraction and quality ratings would be improved if sufficient information on key methodological details were always provided, and the importance of concealment of allocation suggests that routine use of an external randomisation agency may be justified if feasible.

Although the review provides information on comparisons between counselling and three other treatments (usual care, GP antidepressant treatment and cognitive-behaviour therapy), the evidence is limited with respect to two of those treatments, and there is scope to compare counselling with other psychological therapy treatments, such as problem-solving (Mynors-Wallis 1997) and self-help (White 1995).

Research into the long-term outcome of patients treated with psychological therapies is a key priority. Although one trial identified for the update included outcomes at 36 months, this was in a population of chronically ill patients who did not demonstrate gains in the short term. More research is required into the long-term clinical and economic impacts of psychological therapies such as counselling, although the methodological and logistical challenges are significant.

Only one trial (King 2000) used a method for dealing with data missing from subjects who failed to attend for research assessments. Although there is a genuine lack of consensus among methodologists over the correct methods to impute data, the lack of uniformity of approach does mean that the data on which the review and meta-analysis is based may be biased, as the comparability in group characteristics gained through randomisation may be lost through attrition.

Finally, it is important to remember the notion of quality. In his book, *Effectiveness and Efficiency*, Cochrane wrote that 'We all recognise quality when we see it and particularly when we receive it. In 'cure' outcome plays an important part in determining quality, but it is certainly not the whole story. The really important factors are kindness and the ability to communicate on the part of all members of the medical team. In 'care' (these factors) become very much more important' (Cochrane 1972). As members of the primary care team, counsellors offer care as well as cure, and both factors figure in evaluating counselling in primary care. There is a great deal of research to be done (both qualitative and quantitative) to understand both care and cure, the treatment process and the outcomes that are desired by patients and GPs, and to incorporate this understanding into the measures used to evaluate counselling. This is not to undermine any attempt to measure efficacy, but to

emphasise the need for pragmatic, randomised trials of counselling in primary care with a greater emphasis on subjective symptoms, daily functioning and quality of life (King 1997), and the qualities of the interventions which help patients feel better.

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* Indicates the major publication for the study

CHARACTERISTICS OF STUDIES

Characteristics of included studies *[ordered by study ID]*

Barrowclough 2001

Methods	RCT Recruitment: Patients referred from primary care and community services, and self referrals were also accepted following advertisements in local newspapers. The majority of referrals came from primary care clinics. Randomisation: Patients randomly allocated using minimisation stratified on severity of symptoms, co-morbid psychiatric disorder and diagnosed anxiety disorder. Randomisation conducted by means of a computer program operated by an independent third party. Follow up: 16 weeks (post treatment) and 3, 6 and 12 months Attrition: 9 patients lost in baseline period before access to treatment (6 declined to enter therapy or complete follow up, 3 patients excluded because of serious physical illness), 3 dropped out within first four sessions and were lost to follow up. Forty three patients completed treatment and retention at follow up was 39/43 (91%) at 3 months, 39/43 (91%) at 6 months and 40/43 (93%) at 12 months.
Participants	T = 24 C = 19 (excluding those lost in 6 week baseline period) Included: Patients, aged 55 and over, diagnosed with anxiety disorder by SCID (panic disorder with and without agoraphobia, social phobia, GAD and anxiety disorder not otherwise specified, Beck Anxiety score outside the normal range and assessed by the GP as not suffering from medical conditions that produces anxiety symptoms. Excluded: Patients with evidence of significant cognitive impairment, patients on medication which was constant for 3 months before entry and planned to remain constant for the duration of the study. Age: Mean 72.0 (SD 6.2) Gender: Male 10 (23%); Female 33 (77%). Marital status: 21 (49%) married, 17 (39%) widowed, 3 (7%) divorced, 2 (5%) single Education: 41 (95%) left school between 14 and 16, 2 (5%) completed college/university Medication: 100% prescribed medication, 25 (58%) anxiolytics, 22 (51%) antidepressants, 4 (9%) both Accommodation: 42 (98%) own accommodation, 1 (2%) sheltered Health: 8 (19%) had no current physical health problem Anxiety: 22 (51%) panic disorders with and without agoraphobia, 1 (2%) social phobia, 8 (19%) GAD and 12 (28%) anxiety disorder not otherwise specified, mean duration 20 years (SD 20) Comorbidity: 10 (23%) had comorbid psychiatric disorders, 7 (16%) concurrent mood disorder secondary to anxiety, 2 (5%) panic as secondary to primary anxiety disorder, 1 (2%) GAD secondary to primary anxiety disorder Setting: Not clear Region: Manchester, England.
Interventions	Treatment: Supportive counselling by BAC accredited counsellor and psychology graduate (n = 1), detailed in a treatment manual, involving verbal and nonverbal attending, active listening, open questioning, reflecting back, paraphrasing and summation. Monthly peer supervision to ensure treatment fidelity, audiotaping for fidelity check.

Barrowclough 2001 (Continued)

	Control: CBT from doctoral level clinical psychologists with specialist training in cognitive therapy (n=2), detailed in manuals, particular CBT models based on particular diagnoses. Monthly peer supervision to ensure treatment fidelity, audiotaping for fidelity check. Duration: T: 8-12 sessions of 1 hour over 16 weeks, majority delivered in patient's home C: 8-12 sessions of 1 hour over 16 weeks, majority delivered in patient's home Mean 10.7 sessions sd 1.2 for both therapies, no difference between therapies	
Outcomes	Instruments: Beck Anxiety Inventory (BAI), State-Trait Anxiety Inventory (STAI) Trait form, Hamilton Rating Scale for Anxiety (HRSA), Beck Depression Inventory, Geriatric Depression Scale (GDS), Credibility of Treatment questionnaire.	
Notes	Quality Rating Scale: 1) = 1 2) = 0 3) = 2 4) = 0 5) = 2 6) = 2 7) = 2 8) NA 9) = 1 10) = 2 11) = 2 12) = 2 13) NA 14) = 2 15) NA 16) = 2 17) = 2 18) = 2 19) = 2 20) = 2 21) = 2 22) = 2 23) = 2 Total 34	
<i>Risk of bias</i>		
Item	Authors' judgement	Description
Allocation concealment?	Yes	A - Adequate

Methods	RCT Recruitment: Patients identified by GPs during routine consultations. Criteria for trial eligibility were agreed by GPs and counsellors prior to the study. Randomisation: Random allocation made using a card where concealed experimental and control options were prepared in advance by computer. With consent, patients entered into study and then randomly allocated to treatment or control by GP by peeling sticker from patient allocation card to reveal allocation. Follow up: 6 weeks (post-treatment) Attrition: 12/204 (6%) patients refused entry to trial. 67/124 (54%) T patients followed up and 41/68 (60%) C patients followed up. Health care utilisation data from GPs for 88% T and 86% C groups.
Participants	T = 124 C = 68 Included: Patients, aged 16 and over, presenting with recent rather than chronic psychological and emotional problems (e.g., stress, crisis, relationship or family problems, anxiety, depression, bereavement, sexual difficulties, employment and financial problems). Excluded: Patients with severe psychiatric problems (not specified). Age: Mean 38.7 Gender: Male 66 (35%); Female 126 (65%). Class: I/II 57 (30%); III 43 (22%); IV 33 (17%); V 33 (18%); Student/NK 23 (12%) Setting: 7 General Practices Region: Northampton-shire, England.
Interventions	Treatment: One to one counselling by BACP accredited or accreditable counsellors (n = 5), using BACP definition of counselling. Control: Usual GP care (n = 28). Duration: T: Usually one 1 hour session per week for six weeks. 107 patients received 54 GP consultations in 6 weeks. C: 60 patients received 39 GP consultations over 6 weeks.
Outcomes	Instruments: General Health Questionnaire (GHQ); Health service usage (GP consultation rates, prescribing and referrals to external agencies) extracted from medical records; Patient evaluation of treatment (4 item measure).
Notes	Quality Rating Scale: 1) = 1 2) = 1 3) = 0 4) = 0 5) = 2 6) = 1

Boot 1994 (Continued)

	7) = 1	
	8) = NA	
	9) = 1	
	10) = 1	
	11) = 1	
	12) = 1	
	13) = NA	
	14) = 0	
	15) = NA	
	16) = 1	
	17) = 2	
	18) = 1	
	19) = 2	
	20) = 2	
	21) = 1	
	22) = 2	
	23) = 2	
	Total: 23	
<i>Risk of bias</i>		
Item	Authors' judgement	Description
Allocation concealment?	No	C - Inadequate

Catalan J, UK a

Methods		
Participants		
Interventions		
Outcomes		
Notes		
<i>Risk of bias</i>		
Item	Authors' judgement	Description
Allocation concealment?	Unclear	D - Not used

Methods	PPCT Recruitment: GPs assessed patients using checklist (Research Diagnostic Criteria for Major depression). Those with mild to moderate depression recruited. Randomisation: Blocks of four stratified by practice. Allocation by telephone. Patients who refused randomisation received treatment of choice. Follow-up: 8 weeks and 12 months Attrition: For randomised patients, 85/103 (83%) completed 8 week questionnaire; 78/103 (76%) attended 8 week visit with GP; 65/103 (63%) completed 12 months questionnaire, 46/103 (45%) attended for 12 month visit with GP; 99/103 (96%) had 12 month case note review. For preference patients, 164/220 (75%) completed 8 week questionnaire; 142/220 (65%) completed 12 months questionnaire, 80/220 (36%) attended for 12 month visit with GP; 212/220 (96%) had 12 month case note review. Significant difference ($p = 0.01$) in attendance at 12 months follow up appt - attendance ranged between 25% for patients choosing anti depressants to 53% for those randomised to anti depressants.
Participants	Randomised: T = 52 Drugs = 51 Preference: T = 140 Drugs = 80 Included: Aged 18 - 70, met Research Diagnostic Criteria. Excluded: Suicidal; psychotic; post natal depression; recent bereavement; drug or alcohol misuse. Age: Mean 37.8 Gender: Male 23% Class: I/II 30% III 38% IV or V 33% Ethnicity: not reported. Setting: 31 practices Region: Trent health region, UK
Interventions	Intervention: T: Generic counselling provided by trained counsellor Drugs: Antidepressant treatment from GP Duration: T: Six session guideline - actual number not clear Drugs: Not clear

Chilvers 2001 (Continued)

Outcomes	Instruments: Beck Depression Inventory (BDI); Research Diagnostic Criteria (RDC); GP rating: SF - 36; global outcome.	
Notes	Quality Rating Scale: 1) = 1 2) = 1 3) = 2 4) = 2 5) = 2 6) = 2 7) = 1 8) = NA 9) = 1 10) = 2 11) = 1 12) = 2 13) = NA 14) = 0 15) = NA 16) = 1 17) = 2 18) = 2 19) = 2 20) = 2 21) = 2 22) = 2 23) = 2 Total: 32	
Risk of bias		
Item	Authors' judgement	Description
Allocation concealment?	Yes	A - Adequate

Friedli 1997

Methods	RCT Recruitment: Patients presenting with emotional difficulties identified and referred for entry into study, with patient consent, by GP. Randomisation: Block randomisation was carried out. Two sets of blocks of six (three therapist and three GP) random combinations were sealed in consecutive envelopes. Patients were randomly assigned to therapist or GP at the end of the baseline assessment by researcher. Follow up: 1) 3 months 2) 9 months Attrition: 35/171 patients identified by GPs as eligible for trial, were excluded, of whom 20 refused entry. Of 35 non participants, 80% female. 110 (81%) followed up at 3 months and 117 (86%) at 9 months. At 9 months 62 (89%) T and 55 (83%) C followed up. No significant differences in baseline scores between those followed up and those lost to follow up.
Participants	T = 70 C = 66 Included: Patients aged 18 years or over, with recent onset (last six months) of emotional difficulties deemed by GP to require brief psychotherapy. No consultation for emotional illness for 12 months before index episode. Excluded: Receiving psychological treatment; psychotic or chronic mental illness; actively suicidal; severe drug or alcohol dependency; physical illness such that unable to attend surgery; language difficulties, illiteracy; learning disability. Age: Mean age 39 Gender: M: 26 (19%); F: 110 (81%) Class: I - IIIa 102 (81%); IIIb - V 24 (19%) Ethnicity: White 125 (92%); Non white 11 (8%) Setting: 14 general practices Region: N.W. London, UK.
Interventions	Treatment: Brief non-directive (Rogerian) one-to-one psychotherapy by four BACP accredited or accredited counsellors. Control: Standard GP care. Fourteen practices in London, UK; number of GPs who referred or participated is unclear. GPs discouraged from referring patients to therapist during trial unless essential. Duration: T: 6 - 12 sessions of 50 mins. Mean 7.7 sessions (s.d. 3.8, range 1 - 12). C: Not reported.
Outcomes	Instruments: Beck Depression Inventory (BDI); Brief Symptom Inventory (BSI); Modified Social Adjustment Scale (SAS); Revised Clinical Interview Schedule (CIS). Patient satisfaction with treatment measured using Brief Structured Recall for Satisfaction.

Friedli 1997 (Continued)

Notes	Quality Rating Scale:	
	1) = 2	
	2) = 1	
	3) = 2	
	4) = 2	
	5) = 2	
	6) = 2	
	7) = 1	
	8) = NA	
	9) = 1	
	10) = 1	
	11) = 2	
	12) = 1	
	13) = NA	
	14) = 2	
	15) = NA	
	16) = 1	
	17) = 2	
	18) = 1	
	19) = 2	
	20) = 2	
	21) = 2	
	22) = 2	
	23) = 2	
Total: 33		
<i>Risk of bias</i>		
Item	Authors' judgement	Description
Allocation concealment?	Yes	A - Adequate

Harvey 1998

Methods	RCT Recruitment: GPs identified suitable patients; requested consent; recorded baseline data; completed scales and then randomised patient. Randomisation: Subjects randomly allocated using sealed opaque envelopes prepared outside the practices by the research team. Regular checks made to ensure envelopes being opened in strict number order. Block randomisation (six block size) was used, with a 2:1 ratio in favour of counselling to avoid waiting lists for counselling. Follow up: 4 months. Attrition: 122/164 (75%) patients followed up at 4 months, 24% and 26% from each arm (not clear which, presumably T and C respectively).
Participants	T = 111 C = 51 Included: Patients aged 16 and over with minor mental health problems, irrespective of previous mental health history. Excluded: Patients with phobic conditions or psychoses. Age: 37.0 (median) Gender: Male 42 (26%); Female 120 (74%) Class: Non manual 54 (36%); Manual 18 (12%); Economically inactive 80 (53%) Setting: GP surgeries and health centres. Region: Cardiff and Swansea, Wales.
Interventions	Treatment: Brief non- standardised person centered one to one counselling (including solution focused, cognitive behavioural) by 9 different professionals. Counsellors were BAC accredited or trained to diploma standard. Control: Routine GP care (GPs from 9 practices) including drug treatment, referral to secondary care or other agencies. Duration: T: Treatment offered up to 6 weekly sessions of 50 mins, median attended 3 (mean 4.2), 3.67 hours, IQR of 5.3, 3.6% (n = 3) DNA. C: Mean 1.5 hrs GP time, 0.22 referrals.
Outcomes	Instruments: Hospital Anxiety and Depression Scale (HAD); COOP/WONCA functional health assessment scales; Duke Functional Social Support Scale (DFSS); Delighted-Terrible Faces overall assessment of quality of life (DT); Short Form 36 (Swansea practices only). Cost of counsellor time £11 (actual costs) or £15 per hour (from recent survey). GP time cost £25 per hour. Cost of medication and referrals to other agencies (latter based on mean prices set by NHS Trusts in Avon). Sensitivity analysis used 3 approaches to referral costs 1) assumed NHS costs only and that number of Out Patient appointments consistent with specialty follow up patterns observed 2) As above, but included costs of private referrals 3) assumed that each out patient referral resulted in only one appointment and included costs of private referrals.
Notes	Quality Rating Scale: 1) = 1 2) = 1 3) = 1 4) = 2

Harvey 1998 (Continued)

	5) = 2 6) = 2 7) = 1 8) = NA 9) = 1 10) = 1 11) = 0 12) = 1 13) = NA 14) = 1 15) = NA 16) = 1 17) = 2 18) = 1 19) = 2 20) = 1 21) = 1 22) = 2 23) = 2 Total: 26
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Risk of bias

Item	Authors' judgement	Description
Allocation concealment?	Yes	A - Adequate

Hemmings 1997

Methods	RCT Recruitment: Identification, request for consent and randomisation by GPs. Randomisation: GP opened a sealed random selection envelope containing either a Counselling or Control slip, in a ratio of 2:1. Actual ratio at end of study was 2.85:1. One GP's patients were excluded from the study after referring 9 subjects to Counselling group and only 1 to routine treatment (a chance referral ratio of more than 6: 1 was considered unlikely). Follow up: 1) 4 months 2) 8 months Attrition: 154 (82%) patients followed up at 4 months and 100 (53%) at 8 months. 114/136 (84%) T and 40/52 C (77%) followed up at 4 months. Figures given identical for 8 months but from percentages would be 76 T (56%) and 24 C (46%).
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Participants	T = 136 C = 52 Included: GPs and counsellors agreed criteria taking into account counsellors' training and skills. Included patients with anxiety disorders, including phobic anxiety and obsessive compulsive disorder; depressive disorder; undifferentiated somatoform disorders; psychosexual problems; relationship and family problems; bereavement and substance misuse problems. Excluded: Patients with very severe depression. Age: Mean age 36.8 Gender: Male 52 (28%); Female 136 (72%) Class: I/II 11 (6%); IINM 44 (23%); IIIM 31 (17%); IV 47 (25%); Housewife 55 (29%) Setting: 1 urban, 2 semi rural general practices. Region: Sussex, England.
Interventions	Treatment: One to one generic counselling by 3 different professionals who met minimum requirement for BACP accreditation. Consistent with BACP definition of counselling (personal communication, 2000). Cognitive analytic and psychosynthesis used by two counsellors. Control: Routine care including reassurance and advice. Duration: T: Mean 5.7 sessions per patient (range 0 - 14); no description of length of sessions, assumed therapeutic hour (50 mins). No details of GP consultations. C: 18 (34%) had 1 consultation only, 17 (33%) referred to external counselling and psychology services; 17 (33%) prescribed psychotropic medication; 6 of whom were referred to psychiatric services. No details of GP consultations.
Outcomes	Instruments: Symptom Index; Inventory of Interpersonal Problems; Eyesenck Personality Questionnaire; Repertory Grids; Counselling Satisfaction Questionnaire. Medical notes for details of external referrals and medication. No cost effectiveness analysis undertaken.
Notes	Quality Rating Scale: 1) = 1 2) = 1 3) = 2 4) = 2 5) = 1 6) = 1 7) = 1 8) = NA 9) = 1 10) = 1 11) = 1 12) = 1 13) = NA 14) = 2 15) = NA

Hemmings 1997 (Continued)

	16) = 1 17) = 2 18) = 1 19) = 2 20) = 1 21) = 1 22) = 2 23) = 2 Total: 27
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Risk of bias

Item	Authors' judgement	Description
Allocation concealment?	No	C - Inadequate

King 2000

Methods	PPCT Recruitment: Identification by GP. Randomisation: By numbered, sealed, opaque envelopes. Allocation was blocked and stratified for BDI score. Patients either randomised between all three treatments, between two psychological therapies, or allocated by preference. Separate randomisation schedules for randomisation between three treatments and randomisation between the two psychological therapies, and for each assessor. Follow-up: 4 and 12 months. Attrition: 180/197 (91%) of patients randomised between the three treatments at 4 months; 165/197 (84%) at 12 months. 111/130 (85%) of patients randomised between two treatments at 4 months; 101/130 (78%) at 12 months. 120/137 (88%) of patients with preferences at 4 months; 106/137 (77%) at 12 months.
Participants	Randomised between three therapies (NDC 67, CBT 63, GP 67). Randomised between 2 therapies (NDC 59, CBT = 71). Preference allocation (NDC 54, CBT 81, GP = 2) Included: Patients with depression or mixed anxiety/depression. Excluded: Suicidal; therapy in last 6 months; on anti-depressants; restricted mobility; organic brain syndrome; language or learning difficulties. Age: Mean 39 in NDC, mean 36 in CBT, mean 37 in GP Gender: 53 (79%) F in NDC, 49 (78%) in CBT, 50 (75%) in GP. Class: I -III: 46 (69%) in NDC, 40 (66%) in CBT, 45 (67%) in GP.

King 2000 (Continued)

	Ethnicity: 61 (92%) white in NDC, 57 (91%) in CBT, 59 (89%) white in GP. Setting: 24 practices Region: London and Greater Manchester, although some patients seen in hospital and community setting.		
Interventions	T1 = Non directive counselling from BACP accreditable therapists T2 = cognitive-behavioural therapy from BABCP accreditable therapists C = Routine GP care. Duration: T1 = mean of 6.4 sessions plus 7.7 surgery contacts over 12 months T2 = mean of 5.0 sessions plus mean of 6.5 surgery contacts over 12 months C = mean of 9.1 surgery contacts over 12 months		
Outcomes	Instruments: Beck Depression Inventory; Brief Symptom Index, Social Attitudes Scale, Euroqol; Computerised revised clinical interview schedule; satisfaction scale. Cost effectiveness analysis.		
Notes	Quality Rating Scale: 1) = 2 2) = 1 3) = 2 4) = 2 5) = 2 6) = 2 7) = 2 8) = NA 9) = 1 10) = 2 11) = 2 12) = 2 13) = NA 14) = 2 15) = NA 16) = 1 17) = 2 18) = 2 19) = 2 20) = 2 21) = 2 22) = 2 23) = 2 Total: 37		
<i>Risk of bias</i>			
Item	<table> <tr> <th>Authors' judgement</th><th>Description</th></tr> </table>	Authors' judgement	Description
Authors' judgement	Description		

King 2000 (Continued)

Allocation concealment?	Yes	A - Adequate
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Simpson 2000

Methods	RCT Recruitment: Originally identified by GPs; then changed to screening waiting surgery patients using BDI. Randomisation: Health Authority undertook randomisation using random number tables. Follow-up: 6 and 12 months. Attrition: T = 82/92 (89%) at 6 months, 75/92 (82%) at 12 months. C = 79/89 (89%) at 6 months, 68/89 (76%) at 12 months.
Participants	T = 92 C = 89. Included: Aged 18 - 70 with mild - moderate symptoms of depression from 6 months or more; depression or anxiety/ depression as main symptom; score 14+ on BDI. Excluded: Severe depression or anxiety; anxiety only; drug or alcohol problems; psychotic or suicidal; chronic depression (5 years+); heart/sink; therapy in last 6 mos. Age: T = mean 42 C = mean 44 Gender: T = 78/92 (85%) F C = 67/89 (75%) Female Class: T = 20% manual; 34% non manual; 20% retired; 26% unemployed C = 19% manual; 36% non manual; 19% retired; 26% unemployed. Ethnicity: not reported Setting: 9 practices Region: Derbyshire, UK.
Interventions	T = Psychodynamic or non-directive counselling C = Routine GP care Duration: T = Mean 6 sessions of 55 mins (range 1 - 16). C = 4 GP consultations
Outcomes	Beck Depression Inventory; Social Adjustment Schedule; Inventory of interpersonal problems; Social Attitudes Scale; Duke Social Support scale. Cost effectiveness analysis.

Simpson 2000 (Continued)

Notes	Quality Rating Scale:	
	1) = 2	
	2) = 1	
	3) = 2	
	4) = 2	
	5) = 2	
	6) = 2	
	7) = 2	
	8) = NA	
	9) = 1	
	10) = 2	
	11) = 2	
	12) = 2	
	13) = NA	
	14) = 2	
	15) = NA	
	16) = 1	
	17) = 2	
	18) = 2	
	19) = 2	
	20) = 2	
	21) = 2	
	22) = 2	
	23) = 2	
	Total: 37	
Risk of bias		
Item	Authors' judgement	Description
Allocation concealment?	Yes	A - Adequate

Characteristics of excluded studies [ordered by study ID]

Ali 2003	Training did not meet requirements of the review
Anderson 1979	No random allocation
Anderson S, Hasler J	
Appleby 1997	Cognitive-behavioural therapy
Appleby 2003	Training did not meet requirements of the review

(Continued)

Arn 1989	Psychosomatic population
Ashurst 1983	Training did not meet requirements of the review
Barrett 1999	Problem solving therapy
Barsky 2004	Cognitive-behavioural therapy
Bellamy 2000	No random allocation
Bennun 1984	Not primary care based
Benson 1988	Group therapy
Blakey 1986	Cognitive-behavioural therapy. No random allocation
Blanchard 1995	Nurse intervention involving counselling. Training did not meet requirements of the review
Blomhoff 2001	Cognitive-behavioural therapy
Bolton 2001	Cognitive-behavioural therapy
Booth 1997	No random allocation
Booth H, et al.	
Brantley 1986	Cognitive-behavioural therapy
Brodady 1983	Psychodynamic therapy
Brody 1990	GP counselling. Training did not meet requirements of the review
Brown 2004	Not primary care based. Psychoeducational therapy
Browne 2002	Interpersonal therapy
Catalan 1984	Problem solving therapy
Catalan 1991	Problem solving therapy
Cooper 1975	Social work counselling
Cooper 1997	Training did not meet requirements of the review

(Continued)

Corney 1984	Social work counselling. Training did not meet requirements of the review
Crowe 1978	Not primary care based
Dowrick 2000	Problem solving therapy
Earll 1982	Cognitive-behavioural therapy
Gath 1986	Problem solving therapy
Gournay 1994	Community psychiatric nurse counselling. Training did not meet requirements of the review
Hawton 1987	Not primary care based
Hebert 1994	Not primary care based
Holden 1989	Nurse counselling. Training did not meet requirements of the review
Honey 2002	Psychoeducational therapy
Huibers 2004	Cognitive-behavioural therapy. Training did not meet requirements of the review. Fatigued population
Hunter 1995	Problem solving therapy
Huygen 1983	No random allocation
Judd 2001	Interpersonal counselling and cognitive-behavioural therapy
Karlberg 1998	Psychosomatic population
Kashner 1995	Consultation-liaison intervention
Katon 1992	Consultation-liaison intervention
Katon 1995	Consultation-liaison intervention
Katon 1996	Consultation-liaison intervention, cognitive-behavioural therapy
King 1994	Training did not meet requirements of the review
King 2002	Cognitive-behavioural therapy.
Klerman 1996	Interpersonal counselling. Training did not meet requirements of the review

(Continued)

Kupshik 1999	Guided bibliotherapy
Lang 2003	Cognitive-behavioural therapy
Lidbeck 1997	Cognitive-behavioural therapy
Lofvander 1997	Pain and rehabilitation population.
Lynch 1997	Problem solving therapy
Lyon 1993	No random allocation
Maisiak 1996	Psychosomatic population. Not primary care based
Malt 1999	GP counselling. Training did not meet requirements of the review
Mann 1998	Consultation-liaison intervention
Marks 1985	Cognitive-behavioural therapy
McLeod 1997	Cognitive-behavioural therapy
Miranda 1994	Cognitive-behavioural therapy
Moldenhauer 2004	Cognitive-behavioural therapy
Munoz 1995	Cognitive-behavioural therapy
Mynors-Wallis 1995	Problem solving therapy
Mynors-Wallis 1997	Problem solving therapy
Mynors-Wallis 2000	Problem solving therapy
Paykel 1982	Not primary care based
Power 1989	Cognitive-behavioural therapy
Power 1990	Cognitive-behavioural therapy
Power 2000	Cognitive-behavioural therapy
Raphael 1977	Not primary care based

(Continued)

Richards 2003	Guided bibliotherapy
Ridsdale 2001	Chronic fatigue population. Training did not meet requirements of the review
Ridsdale 2004	Chronic fatigue population. Cognitive-behavioural therapy
Robson 1984	Cognitive-behavioural therapy
Ross 1985	Cognitive-behavioural therapy
Saarijarvi 1991	Chronic pain population
Schilte 2001	Training did not meet requirements of the review
Schmaling 2002	Problem solving therapy
Schulberg 1996	Interpersonal therapy
Scott 1992	Social case work and cognitive-behavioural therapy. Training did not meet requirements of the review
Scott 1997	Cognitive-behavioural therapy
Sharp 1997	Cognitive-behavioural therapy
Sharp 2004	Cognitive-behavioural therapy
Simon 2004	Cognitive-behavioural therapy
Simons 2001	Training did not meet requirements of the review
Stanley 2003	Cognitive-behavioural therapy
Stanton 1998	Nurse counselling. Training did not meet requirements of the review
Sumathipala 2000	Cognitive-behavioural therapy
Teasdale 1984	Cognitive-behavioural therapy
Tutty 2000	Cognitive-behavioural therapy
van Eijk 2004	COPD and diabetes population. Training did not meet requirements of the review
Walsh 2004	Cognitive-behavioural therapy

(Continued)

Watson 2003	Not primary care based.
Wells 2001	Cognitive-behavioural therapy
Wickberg 1996	Nurse counselling. Training did not meet requirements of the review
Willemse 2004	Guided bibliotherapy

DATA AND ANALYSES

Comparison 1. Counselling compared with usual GP care (short term)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	6	772	Std. Mean Difference (IV, Fixed, 95% CI)	-0.28 [-0.43, -0.13]
2 Social function	3	386	Std. Mean Difference (IV, Fixed, 95% CI)	-0.09 [-0.29, 0.11]

Comparison 2. Counselling compared with all GP care (short term)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	7	855	Std. Mean Difference (IV, Fixed, 95% CI)	-0.24 [-0.38, -0.10]

Comparison 3. Counselling compared with usual GP care (short term, sensitivity analysis on quality)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	4	510	Std. Mean Difference (IV, Fixed, 95% CI)	-0.27 [-0.45, -0.09]

Comparison 4. Counselling compared with usual GP care (short term, sensitivity analysis on chronicity)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	5	611	Std. Mean Difference (IV, Fixed, 95% CI)	-0.36 [-0.53, -0.19]

Comparison 5. Counselling compared with usual GP care (short term, sensitivity analysis on quality and chronicity)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	3	349	Std. Mean Difference (IV, Fixed, 95% CI)	-0.41 [-0.62, -0.19]

Comparison 6. Counselling compared with usual GP care (short term, chronic patients only)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	161	Std. Mean Difference (IV, Fixed, 95% CI)	Not estimable

Comparison 7. Counselling compared with usual GP care (long term)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	4	475	Std. Mean Difference (IV, Fixed, 95% CI)	-0.09 [-0.27, 0.10]
2 Social function	3	369	Std. Mean Difference (IV, Fixed, 95% CI)	-0.12 [-0.33, 0.08]

Comparison 8. Counselling compared with all GP care (long term)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	5	540	Std. Mean Difference (IV, Fixed, 95% CI)	-0.05 [-0.23, 0.12]

Comparison 9. Counselling compared with usual GP care (long term, sensitivity analysis on quality)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	3	375	Std. Mean Difference (IV, Fixed, 95% CI)	-0.10 [-0.31, 0.10]

Comparison 10. Counselling compared with usual GP care (long term, sensitivity analysis on chronicity)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	3	332	Std. Mean Difference (IV, Fixed, 95% CI)	-0.11 [-0.34, 0.11]

Comparison 11. Counselling compared with usual GP care (long term, sensitivity analysis on quality and chronicity)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	2	232	Std. Mean Difference (IV, Fixed, 95% CI)	-0.15 [-0.40, 0.11]

Comparison 12. Counselling compared with usual GP care (long term, chronic patients only)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	143	Std. Mean Difference (IV, Fixed, 95% CI)	-0.03 [-0.36, 0.30]

Comparison 13. Counselling compared with usual GP care (very long term, chronic patients only)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	109	Std. Mean Difference (IV, Fixed, 95% CI)	-0.03 [-0.41, 0.34]
2 Social function	1	109	Std. Mean Difference (IV, Fixed, 95% CI)	-0.18 [-0.56, 0.20]

Comparison 14. Counselling compared with GP antidepressant treatment (short term)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	83	Std. Mean Difference (IV, Fixed, 95% CI)	0.04 [-0.39, 0.47]

Comparison 15. Counselling compared with GP antidepressant treatment (long term)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	65	Std. Mean Difference (IV, Fixed, 95% CI)	0.17 [-0.32, 0.66]

Comparison 16. Counselling compared with CBT (short term, depressed patients)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	229	Std. Mean Difference (IV, Fixed, 95% CI)	-0.02 [-0.28, 0.24]

Comparison 17. Counselling compared with CBT (long term, depressed patients)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	209	Std. Mean Difference (IV, Fixed, 95% CI)	0.13 [-0.14, 0.41]

Comparison 18. Counselling compared with CBT (short term, anxious patients)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	43	Std. Mean Difference (IV, Fixed, 95% CI)	0.53 [-0.09, 1.14]

Comparison 19. Counselling compared with CBT (long term, anxious patients)

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	39	Std. Mean Difference (IV, Fixed, 95% CI)	0.47 [-0.18, 1.12]

Comparison 20. Counselling compared with CBT (very long term, anxious patients)

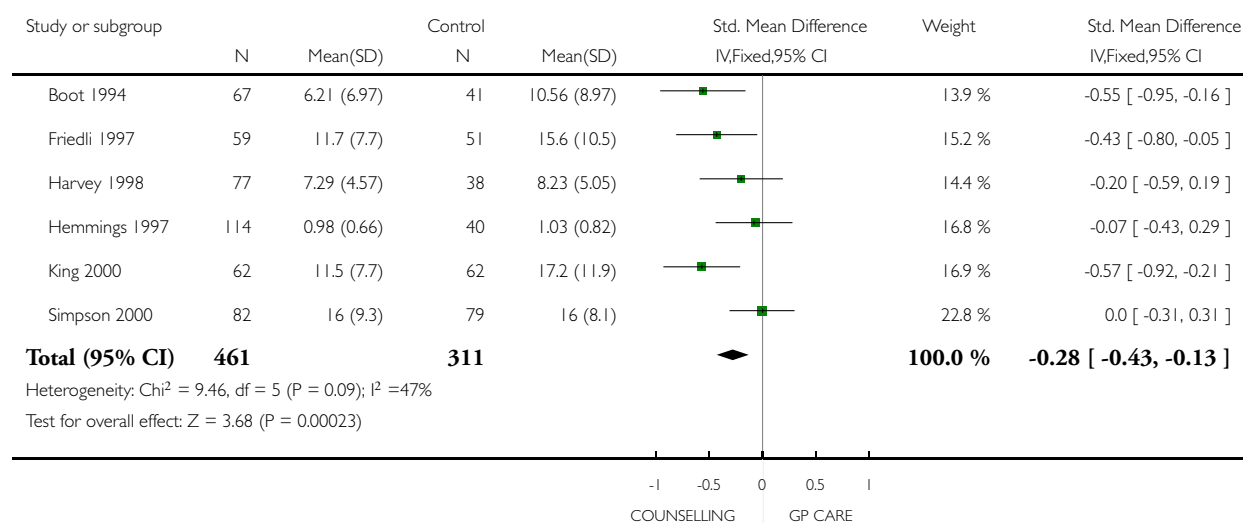
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Mental health	1	39	Std. Mean Difference (IV, Fixed, 95% CI)	0.49 [-0.16, 1.14]

Analysis 1.1. Comparison 1 Counselling compared with usual GP care (short term), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 1 Counselling compared with usual GP care (short term)

Outcome: 1 Mental health

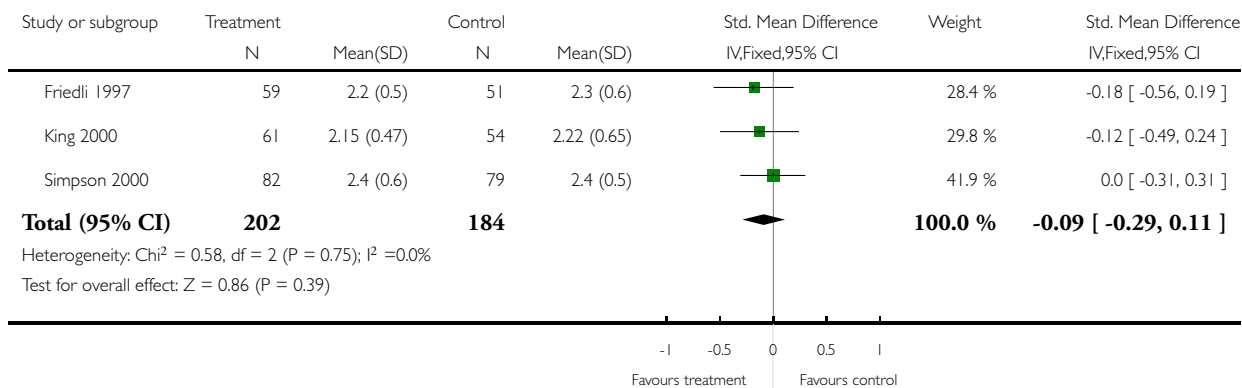


Analysis 1.2. Comparison 1 Counselling compared with usual GP care (short term), Outcome 2 Social function.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 1 Counselling compared with usual GP care (short term)

Outcome: 2 Social function

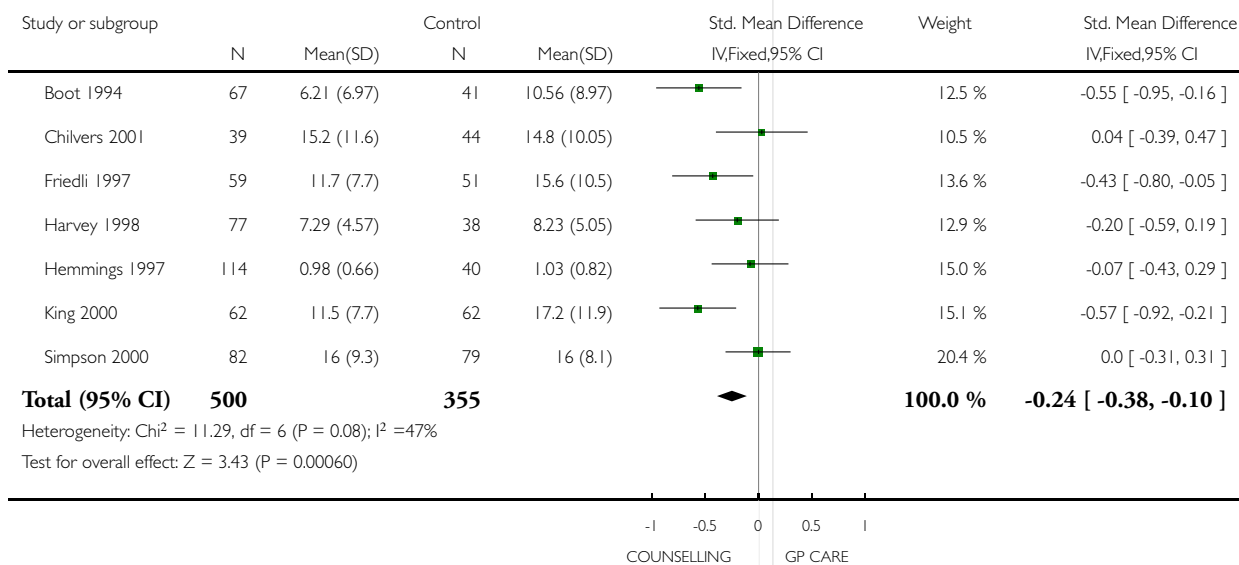


Analysis 2.1. Comparison 2 Counselling compared with all GP care (short term), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 2 Counselling compared with all GP care (short term)

Outcome: 1 Mental health

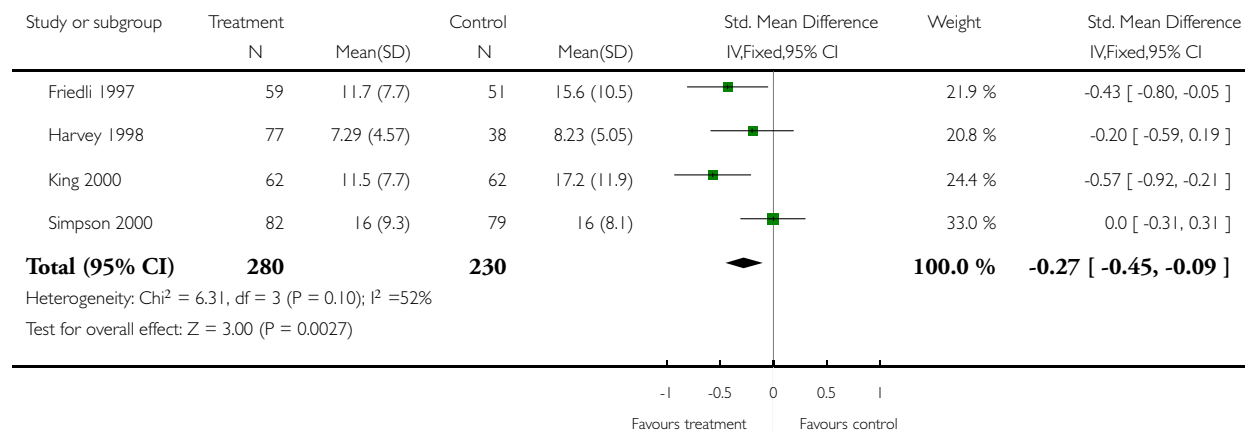


Analysis 3.1. Comparison 3 Counselling compared with usual GP care (short term, sensitivity analysis on quality), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 3 Counselling compared with usual GP care (short term, sensitivity analysis on quality)

Outcome: 1 Mental health

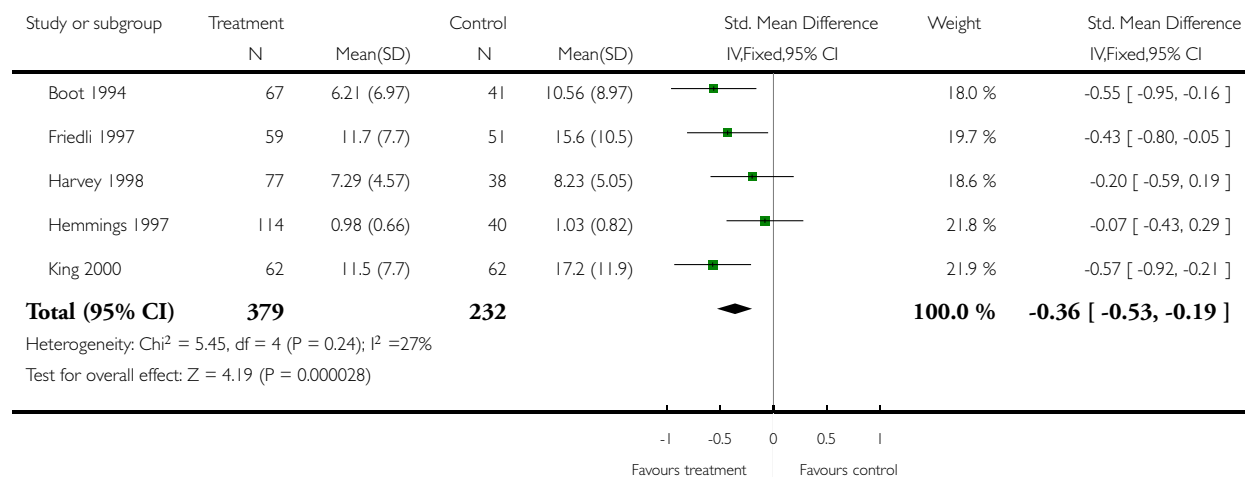


Analysis 4.1. Comparison 4 Counselling compared with usual GP care (short term, sensitivity analysis on chronicity), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 4 Counselling compared with usual GP care (short term, sensitivity analysis on chronicity)

Outcome: 1 Mental health

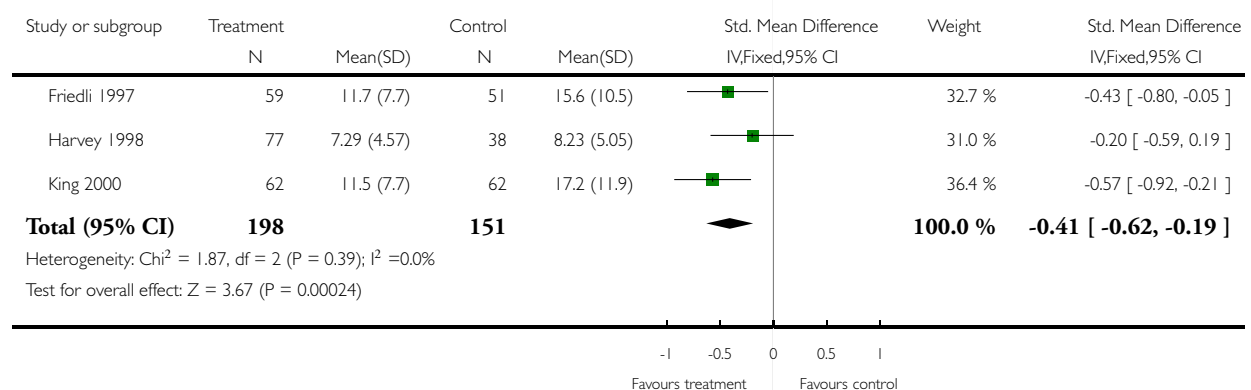


Analysis 5.1. Comparison 5 Counselling compared with usual GP care (short term, sensitivity analysis on quality and chronicity), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 5 Counselling compared with usual GP care (short term, sensitivity analysis on quality and chronicity)

Outcome: 1 Mental health

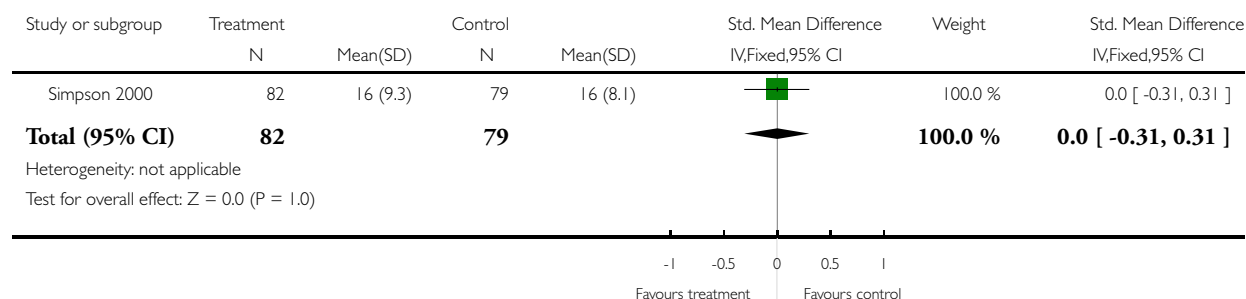


Analysis 6.1. Comparison 6 Counselling compared with usual GP care (short term, chronic patients only), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 6 Counselling compared with usual GP care (short term, chronic patients only)

Outcome: 1 Mental health

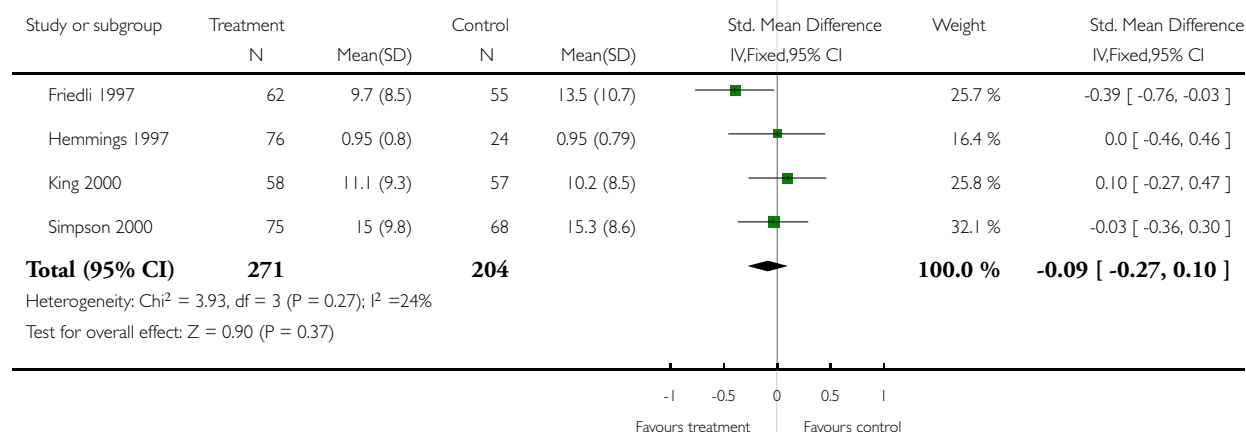


Analysis 7.1. Comparison 7 Counselling compared with usual GP care (long term), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 7 Counselling compared with usual GP care (long term)

Outcome: 1 Mental health

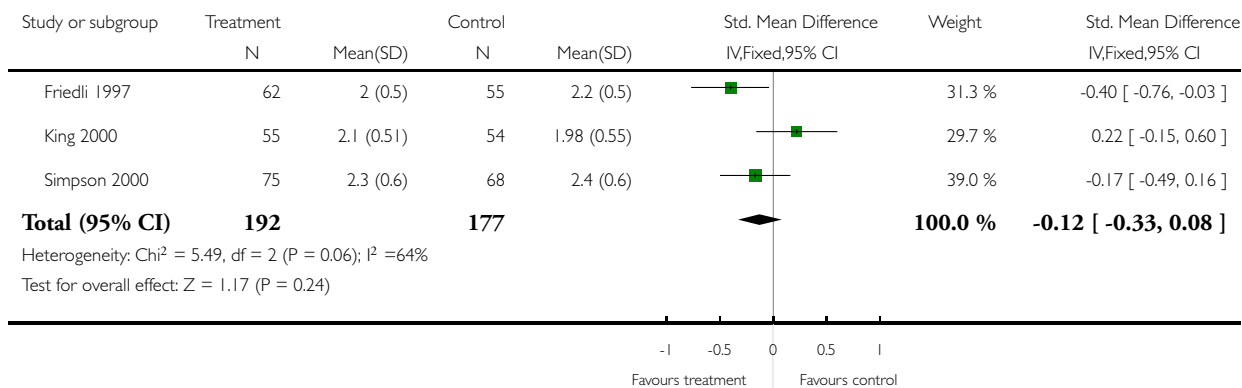


Analysis 7.2. Comparison 7 Counselling compared with usual GP care (long term), Outcome 2 Social function.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 7 Counselling compared with usual GP care (long term)

Outcome: 2 Social function

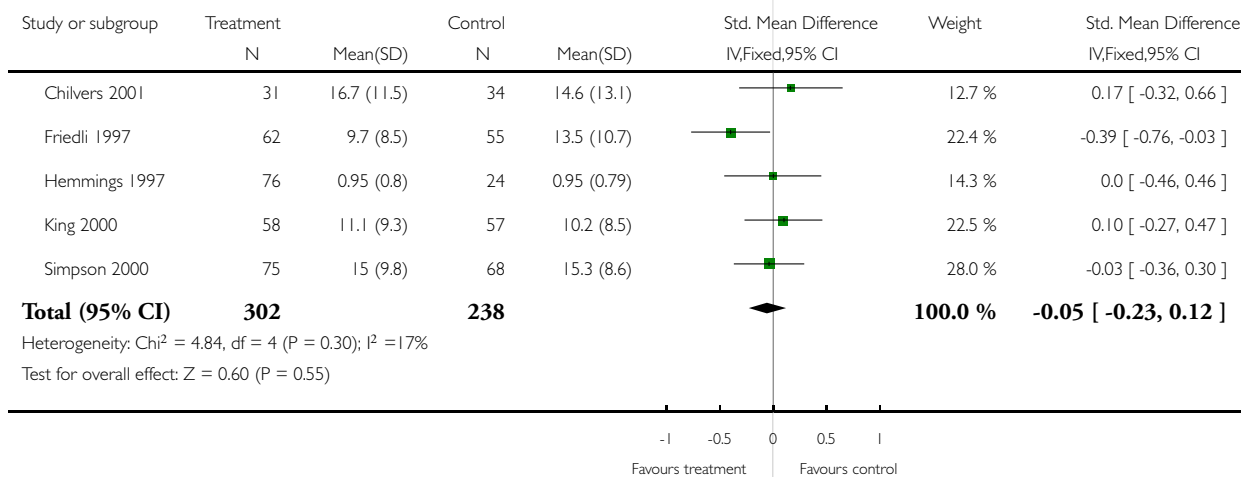


Analysis 8.1. Comparison 8 Counselling compared with all GP care (long term), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 8 Counselling compared with all GP care (long term)

Outcome: 1 Mental health

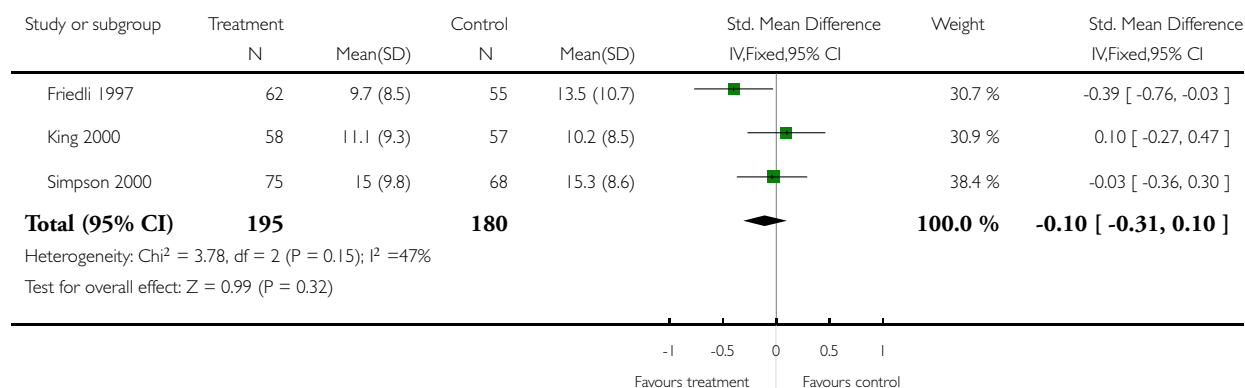


Analysis 9.1. Comparison 9 Counselling compared with usual GP care (long term, sensitivity analysis on quality), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 9 Counselling compared with usual GP care (long term, sensitivity analysis on quality)

Outcome: 1 Mental health

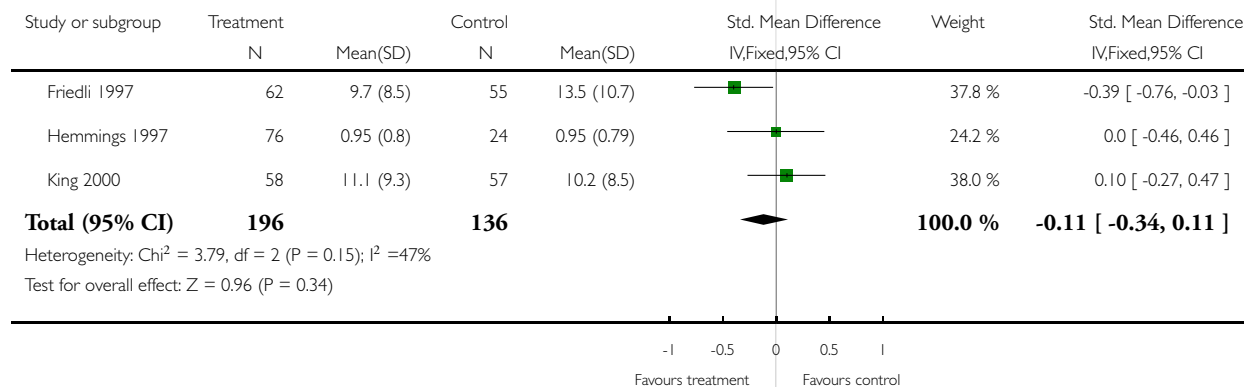


Analysis 10.1. Comparison 10 Counselling compared with usual GP care (long term, sensitivity analysis on chronicity), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 10 Counselling compared with usual GP care (long term, sensitivity analysis on chronicity)

Outcome: 1 Mental health

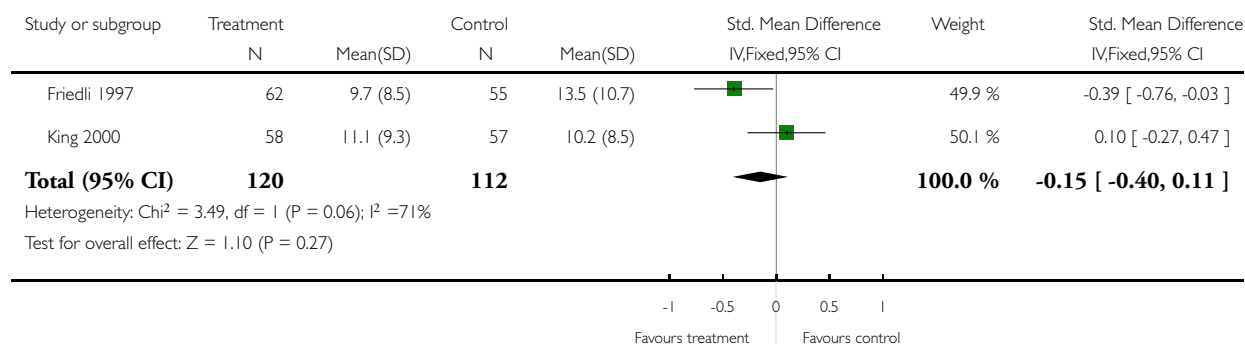


Analysis 11.1. Comparison 11 Counselling compared with usual GP care (long term, sensitivity analysis on quality and chronicity), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 11 Counselling compared with usual GP care (long term, sensitivity analysis on quality and chronicity)

Outcome: 1 Mental health

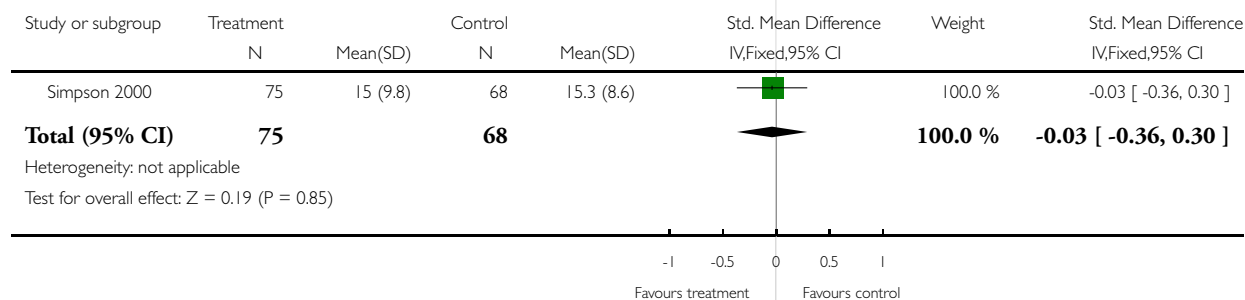


Analysis 12.1. Comparison 12 Counselling compared with usual GP care (long term, chronic patients only), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 12 Counselling compared with usual GP care (long term, chronic patients only)

Outcome: 1 Mental health

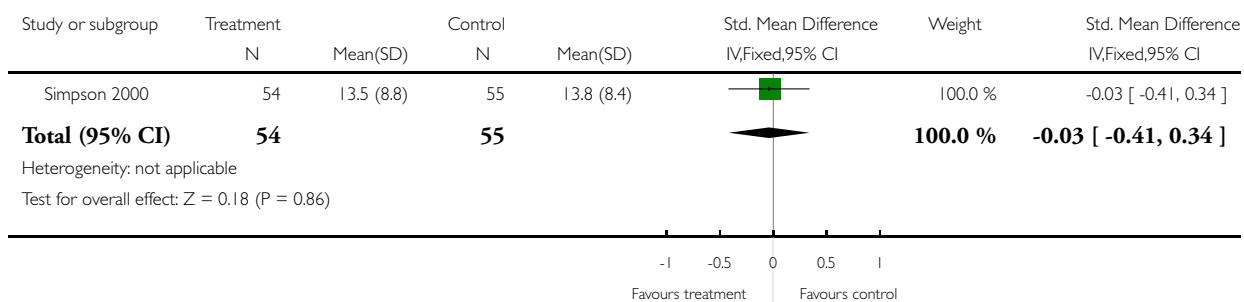


Analysis 13.1. Comparison 13 Counselling compared with usual GP care (very long term, chronic patients only), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 13 Counselling compared with usual GP care (very long term, chronic patients only)

Outcome: 1 Mental health

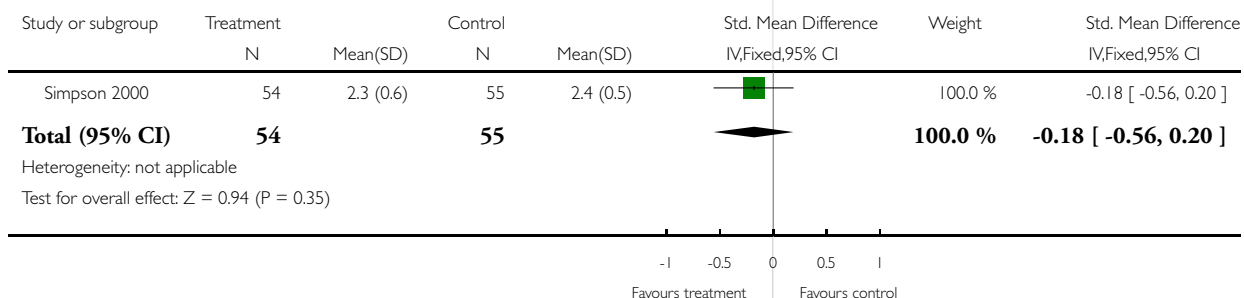


Analysis 13.2. Comparison 13 Counselling compared with usual GP care (very long term, chronic patients only), Outcome 2 Social function.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 13 Counselling compared with usual GP care (very long term, chronic patients only)

Outcome: 2 Social function

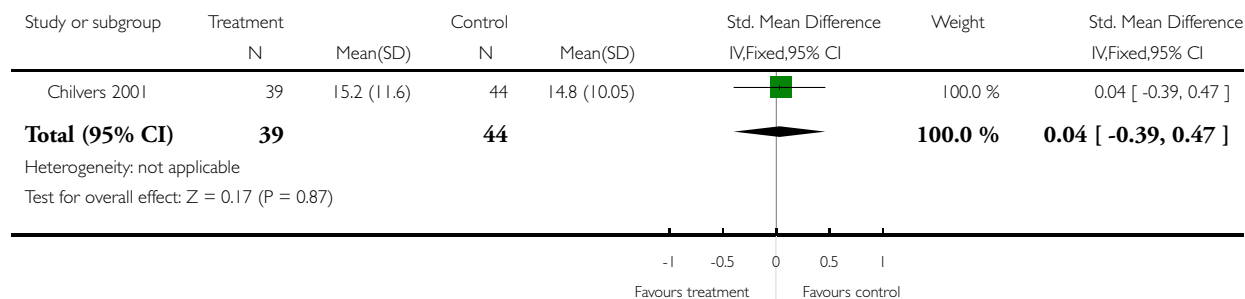


Analysis 14.1. Comparison 14 Counselling compared with GP antidepressant treatment (short term), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 14 Counselling compared with GP antidepressant treatment (short term)

Outcome: 1 Mental health

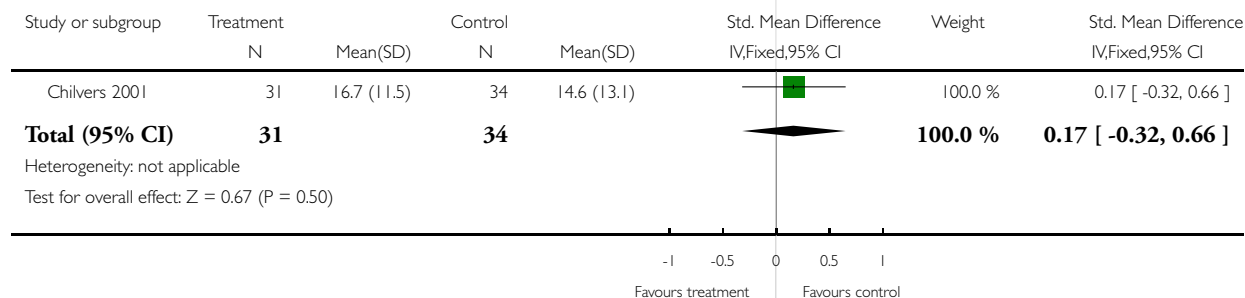


Analysis 15.1. Comparison 15 Counselling compared with GP antidepressant treatment (long term), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 15 Counselling compared with GP antidepressant treatment (long term)

Outcome: 1 Mental health

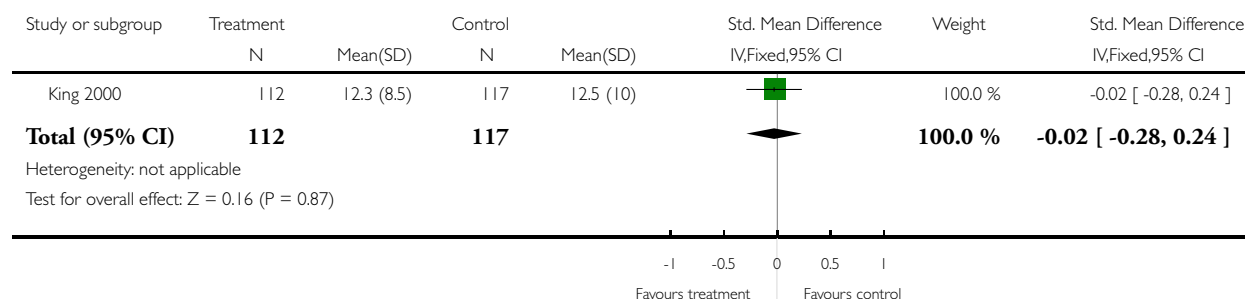


Analysis 16.1. Comparison 16 Counselling compared with CBT (short term, depressed patients), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 16 Counselling compared with CBT (short term, depressed patients)

Outcome: 1 Mental health

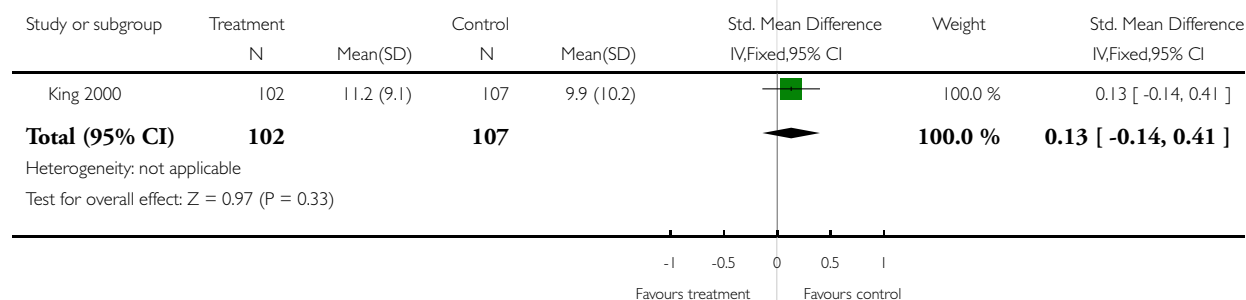


Analysis 17.1. Comparison 17 Counselling compared with CBT (long term, depressed patients), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 17 Counselling compared with CBT (long term, depressed patients)

Outcome: 1 Mental health



Analysis 18.1. Comparison 18 Counselling compared with CBT (short term, anxious patients), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 18 Counselling compared with CBT (short term, anxious patients)

Outcome: 1 Mental health

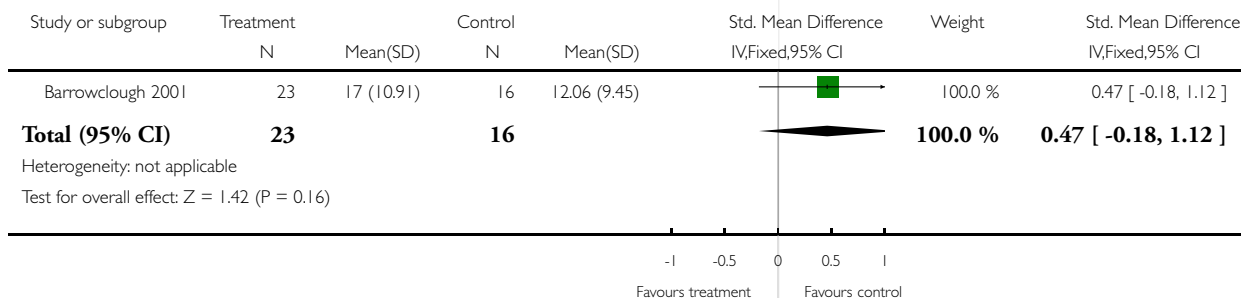


Analysis 19.1. Comparison 19 Counselling compared with CBT (long term, anxious patients), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 19 Counselling compared with CBT (long term, anxious patients)

Outcome: 1 Mental health

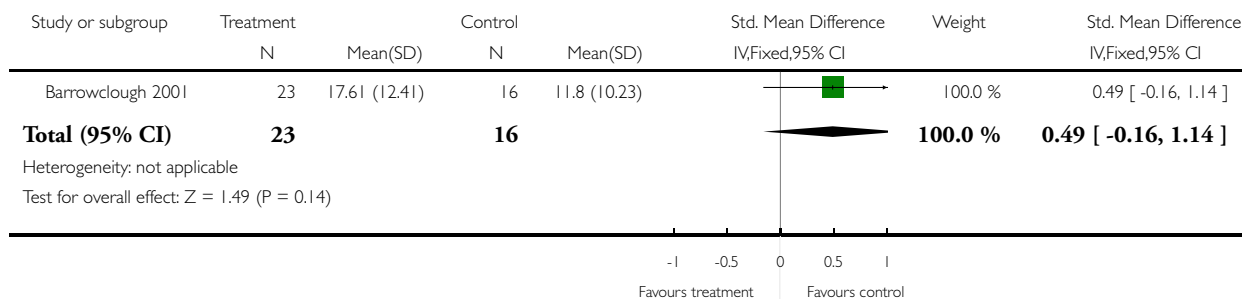


Analysis 20.1. Comparison 20 Counselling compared with CBT (very long term, anxious patients), Outcome 1 Mental health.

Review: Effectiveness and cost effectiveness of counselling in primary care

Comparison: 20 Counselling compared with CBT (very long term, anxious patients)

Outcome: 1 Mental health



WHAT'S NEW

Last assessed as up-to-date: 23 May 2006.

1 November 2008	Amended	Converted to new review format.
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HISTORY

Protocol first published: Issue 1, 1998

Review first published: Issue 1, 2001

24 May 2006	New citation required and conclusions have changed	Substantive amendment
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DECLARATIONS OF INTEREST

NR is Head of Research at the British Association of Counselling and Psychotherapy

SOURCES OF SUPPORT

Internal sources

- National Primary Care Research and Development Centre, University of Manchester, UK.

External sources

- No sources of support supplied

INDEX TERMS

Medical Subject Headings (MeSH)

Cost-Benefit Analysis; Counseling; Family Practice [economics]; Patient Satisfaction; *Primary Health Care [economics]; *Psychotherapy [economics]; Randomized Controlled Trials as Topic

MeSH check words

Female; Humans; Male