**Effects of C‑L services on depression and anxiety: Supplemental Digital Content**

**Overview**

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**Table S-1.** Levels of integration (adapted from Heath, Wise Romero, & Reynolds, 2013 [24]).

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Cooperation**  | **Level**  | **Description**  | **Examples**  |
| Coordinated Care  | Level 1  | *Minimal Collaboration* Patients referred between providers on different sites  | *Consultation on Different Sites* *Not included in the review*  |
| Level 2  | *Basic Collaboration at a Distance* Providers periodically communicate about shared patients  | *Consultation on Different Sites* Burton et al. (1995) [53]: Intervention by clinical psychologist who is based at a different site  |
| Co-located Care  | Level 3  | *Basic Collaboration* *On-Site*Providers based at the same site & communicate but have separate cultures & records | *Consultation On-Site* Jantschek et al. (1998) [66]: Psychotherapy provided by clinical psychologists from Dept. of Psychosomatic Medicine  |
| Level 4  | *Close Collaboration with Some System Integration*Providers have some face-to-face communication about shared patients (screening) and feel part of team  | *Liaison*Baldwin et al. (2004) [51]: screening of all patients, multi-faceted intervention led by mental health liaison nurse  |
| Integrated Care  | Level 5  | *Close Collaboration Approaching Integration* Treatment planning for shared patients (screening), but separate planning for other patients  | *Enhanced Liaison, collaborative care* Huffman et al. (2014) [64]: collaborative care Hubschmid et al. (2015) [63]: Patient needs are treated as a team for shared patients  |
| Level 6  | *Full Collaboration in a Transformed/Merged Practice* Single team with a single treatment plan. Patients experience their care as single system treating the whole person.  | *Interdisciplinary treatment team**Not included in the review*  |

**Table S-2.** Electronic Search Strategy for Ovid Medline®.

| **#** | **Searches** | **Notes** |
| --- | --- | --- |
| 1 | ("19446712" or "19555794" or "18597695" or "15217778" or "11509898" or "10514955" or "7872852" or "1518313").ui. | Test data |
| 2 | "Referral and Consultation"/ | MeSH |
| 3 | ((consult\* or liaison\* or consil\* or inter-disciplin\* or interdisciplin\* or collaborat\* or cooperat\* or co-operat\* or referr\*) adj6 (psych\* or mental\*)).ti,ab. | Text words in title, abstract |
| 4 | collaborative care.ti,ab. |
| 5 | or/2-4 | OR-combination MeSH and text words for consultation |
| 6 | exp "Psychiatry and Psychology"/ | All MeSH-terms for this category |
| 7 | (psych\* or mental\*).ti. | Text words in title |
| 8 | or/6-7 | OR-combination MeSH and text words for psych\* |
| 9 | Inpatients/ | MeSH-terms for hospital |
| 10 | exp Hospitals/ |
| 11 | exp Hospitalization/ |
| 12 | inpatient\*.ti,ab. | Text words in title, abstract for hospital |
| 13 | hospital\*.ti,ab. |
| 14 | or/9-13 | OR-combination MeSH and text words for hospital |
| 15 | exp Prognosis/ | MeSH-terms incl. sub-terms for research, study design, treatment outcome etc. |
| 16 | exp epidemiologic studies/ |
| 17 | exp empirical research/ |
| 18 | practice guideline.pt. | Guideline: publication type  |
| 19 | (guideline\* or consensus).ti. | Text words in title |
| 20 | randomized controlled trial.pt. | Cochrane sensitivity-specificity maximizing search filter for randomized controlled trials (for the indexed part): Source: **Cochrane Handbook** **Version 5.0.2., chapter 6.4.11.1.**[www.cochrane-handbook.org](http://www.cochrane-handbook.org). |
| 21 | controlled clinical trial.pt. |
| 22 | (randomized or randomised).ab. |
| 23 | placebo.ab. |
| 24 | clinical trials as topic.sh. |
| 25 | randomly.ab. |
| 26 | trial.ti. |
| 27 | 21 or 26 or 23 or 20 or 22 or 25 or 24 |
| 28 | exp animals/ not humans.sh. |
| 29 | 27 not 28 |
| 30 | (meta-analy\* or metaanaly\*).ti. | Metaanalysis: terms in title |
| 31 | meta-analysis.pt. | Metaanalysis: publication type |
| 32 | (systematic and (review or overview)).ti. | Systematic review |
| 33 | review.pt. and systematic.ti. |
| 34 | or/15-17 | Aspect: research, study design |
| 35 | or/18-19 | Aspect: guideline |
| 36 | or/30-31 | Aspect: meta-analysis |
| 37 | or/32-33 | Aspect: systematic review |
| 38 | 5 and 8 | Aspects: consultation + psych\* |
| 39 | 14 and 38 | Aspect: consultation + psych\* + hospital🡪 too many hits. Narrow search in next steps |
| 40 | (consult\* or liaison\* or consil\* or inter-disciplin\* or interdisciplin\* or collaborative care or cooperat\* or co-operat\*).ti. | Several terms for the aspect consultation in title |
| 41 | (referr\* and (psych\* or mental\*)).ti. |
| 42 | or/40-41 |
| 43 | 39 and 42 | Aspect consultation in title + psych\* + hospital (this step will not be used in further searches |
| 44 | 34 and 39 | Aspect consultation + psych\* + hospital, narrowed using aspect research |
| 45 | 42 and 44 | Aspects psych\* + hospital + research + terms for the aspect consultation in title (specific search, risk of exclusion of relevant studies) |
| 46 | 29 and 39 | Aspects consultation + psych\* + hospital + Cochrane RCT-filter |
| 47 | 42 and 46 | Aspects consultation + psych\* + hospital + Cochrane RCT-filter + terms for the aspect consultation in title (specific search) |
| 48 | 35 and 39 | Aspects consultation + psych\* + hospital + aspect guideline |
| 49 | 42 and 48 | Aspects consultation + psych\* + hospital + aspect guideline + aspect consultation in title (specific search, risk of exclusion of relevant studies) |
| 50 | 36 and 39 | Aspects consultation + psych\* + hospital + aspect Meta-Analysis 🡪 no relevant hits |
| 51 | 42 and 50 | Narrowing down with terms in title |
| 52 | 37 and 39 | Aspects consultation + psych\* + hospital + aspect systematic review |
| 53 | 42 and 52 | Aspects psych\* + hospital + aspect systematic review + consultation in title |
| 54 | 45 or 47 or 49 or 51 or 53 | Overall result when combining interim findings by OR |
| 55 | general hospital psychiatry.jn. | Search for this journal |
| 56 | 39 and 55 | Aspects consultation + psych\* + hospital + journal |
| 57 | 42 and 56 | Aspects psych\* + hospital + journal + consultation in title |
| 58 | "archives of general psychiatry".jn. | Search for this journal |
| 59 | 39 and 58 | Aspects consultation + psych\* + hospital + journal |
| 60 | 42 and 59 | Aspects psych\* + hospital + journal + consultation in title |
| 61 | 54 or 57 or 60 | Overall result combining interim results |
| 62 | 1 or 61 | Combination with known articles from #1. |
| 63 | remove duplicates from 62 | Final result after removal of duplicates |

**Table S-3:** Risk of Bias Assessment.

Adapted from: O’Donnell A, McParlin C, Robson SC, et al. (2016) [33].

|  |  |  |
| --- | --- | --- |
| Domain | Description | Review author’s judgment |
| Randomization | Describe the method used to generate the allocation sequence in sufficient detail to allow an assessment of whether or not it should produce comparable groups | Was the allocation sequence adequately generated? |
| Allocation Concealment | Describe the method used to conceal the allocation sequence in sufficient detail to determine whether or not intervention allocations could have been foreseen in advance of, or during, enrolment | Was the allocation adequately concealed? |
| Incomplete Outcome Data | Describe the completeness of outcome data for each main outcome, including attrition and exclusions from the analysis. State whether attrition and exclusions were reported, the numbers in each intervention group (compared with total randomized participants), reasons for attrition/exclusions where reported, and any re-inclusions in analyses performed by the review authors | Were incomplete outcome data adequately addressed? |
| Selective Outcome Reporting | State how the possibility of selective outcome reporting was examined by the review authors, and what was found | Are reports of the study free of suggestion of selective outcome reporting? |

**Table S-4**. Characteristics of the studies included in the review.

| **Author(s), year** | **Country** | **Target group** | **N** | **Intervention(s)** | **Psychotropic drugs as part of intervention** | **Control** | **Setting** | **Profession** | **Level of Integration1** | **Intensity** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Brief interventions tailored to the patient** |
| Baldwin et al. 2004 [51] | UK | Geriatrics | 153 | Multi-faceted nurse-led intervention (assessment, direct interventions, liaison support) | yes | TAU (referral to C-L service possible) | Indiv. | Nurse | Level 4 | Adaptive (to medium) |
| Burton et al. 1995 [53] | UK | Cancer (breast) | 215 | Preoperative interview &1) 30-min. PT intervention (client-centered counseling)2) 30-min. chat3) interview only | no | TAU  | Indiv. | Psych. | Level 2 | Short |
| Callaghan & Cheung Li 2002 [54] | China (Hong Kong) | Surgery (hysterectomy) | 96 | Preoperative information and counseling (cognitive distraction & reappraisal) | no | TAU & Information only | Indiv. | Unclear | Level 2 | Short |
| Cole et al. 1991 [55] | Canada | Geriatrics | 80 | Consultation | yes | TAU  | Indiv. | Psych. | Level 4 | Adaptive (Short to medium) |
| Leon-Pizarro et al. 2007 [70] | Spain | Cancer (breast, gynecological) | 66 | 1 session relaxation training, guided imagery & information before radiotherapy | no | TAU & Attention placebo (1 session without relaxation) | Indiv. | Nurse | Level 3 | Short |
| McArdle et al. 1996 [74] | UK | Cancer (breast) | 272 | Supportive counseling from1) breast care nurse2) voluntary organization3) both | no | TAU & information booklet | Indiv. | Nurse | Level 5 | Adaptive (Short to medium) |
| Roykulcha­roen & Good 2004 [80] | Thailand | Surgery (abdominal) | 102 | Relaxation training (pre- and post-surgery) (direct instruction & tape) | no | TAU (no relaxation but instruction to lie in bed quietly) | Indiv. | Nurse | Level 3 | Short |
| Shah et al. 2001 [83] | UK | Geriatrics | 47 | Formal psychogeriatric consultation 24 h after screening | yes | TAU & no consultation after screening | Indiv. | Psych. | Level 3 | Short |
|  | **Interventions based on specific treatment manuals** |
| Austin et al. 2007 [50] | Australia | Pregnancy | 277 | CBT | no | TAU & Booklet (advice to GP) | Group | Multiprof. | Level 4 | Medium |
| Blumenthal et al. 2006 [52] | USA | Transplantation (lung disease) | 328 | Telephone-based coping skills training | no | TAU (medical) | Indiv. | Multiprof. | Level 3 | Long |
| Given et al. 2004 [59] | USA | Cancer (general) | 237 | CBT | yes | TAU ("conventional") | Indiv. | Psych. | Level 3 | Medium |
| Gruen 1975 [60] | USA | Heart disease | 73 | PT | no | TAU (medical) | Indiv. | Psych. | Level 3 | Long |
| Guthrie et al. 1993 [61] | UK | Gastro-intestinal disease | 102 | PT (focus on client-therapist relationship) | no | TAU & attention placebo (same therapist) | Indiv. | Unclear | Level 3 | Medium |
| Herrmann-Lingen et al. 2016 [62] | Germany | Heart disease | 570 | Stepwise PT (with psychodynamic & CBT elements) | no | TAU & 1 information session | Both | Psych. | Level 4 | Long |
| Hubschmid et al. 2015 [63] | Switzer­land | Neurology | 23 | Brief psychodynamic PT | yes | TAU (diagnosis and "advice to seek treatment in private practice") | Both | Multiprof. | Level 5 | Medium |
| Jantschek et al. 1998 [66] | Germany | Gastro-intestinal disease | 108 | Short-term psychodynamic PT & relaxation | no | TAU: Drug treatment only | Indiv. | Psych. | Level 3 | Long |
| Kalaitzi et al. 2007 [67] | Greece | Cancer (breast) | 40 | Brief psychosexual intervention for couples | no | TAU (medical) | Indiv. | Unclear | Level 3 | Medium |
| Koertge et al. 2008 [68] | Sweden | Heart disease | 247 | Stress management training | no | TAU (medical) | Indiv. | Multiprof. | Level 3 | Long |
| Lincoln & Flannaghan 2003 [71] | USA | Neurology | 123 | CBT | no | 1) TAU & attention placebo2) TAU (no contact) | Indiv. | Nurse | Level 3 | Medium |
| Linn et al. 1982 [72] | USA | Cancer (general) | 120 | Counseling (based on Kubler-Ross) | no | TAU | Indiv. | Nurse | Level 3 | Long |
| Mayou et al. 2002 [73] | UK | Heart disease | 80 | 1 hour CBT intervention & FU & outpatient sessions | no | TAU (no contact) | Indiv. | Nurse | Level 4 | Adaptive |
| Moorey et al. 1998 [76] | UK | Cancer (general) | 57 | Problem-focused CBT ("Adjuvant Psychological Therapy") | no | TAU & attention control (Supportive counseling) | Indiv. | Psych. | Level 3 | Medium |
| Napolitano et al. 2002 [77] | USA | Transplantation (lung disease) | 71 | Telephone-based supportive counseling & CBT | no | TAU (medical) | Indiv. | Multiprof. | Level 3 | Medium |
| Schofield et al. 2016 [81] | Australia | Cancer (prostate) | 331 | Group consultation with uro-oncology nurse | no | Best practice supportive care (nurse-led clinic) | Group | Nurse | Level 5 | Medium |
| Schweick­hardt et al. 2007 [82] | Germany | Somatoform disorders | 91 | PT based on modified reattribution, CBT, and PD | no | TAU & psychoeducational reading material | Indiv. | Psych. | Level 3 | Medium |
| Simson et al. 2008 [84] | Germany | Diabetes | 30 | Supportive PT | no | TAU (medical; "psychosomatic input was possible, but not requested") | Indiv. | Nurse | Level 3 | Medium |
| Watkins et al. 2007 [87] | UK | Neurology | 411 | Motivational interviewing | no | TAU (medical, referral possible) | Indiv. | Multiprof. | Level 3 | Medium |
|  | **Integrated and collaborative care** |
| Cole et al. 2006 [56] | Canada | Geriatrics | 157 | Psychiatric assessment, supportive PT/drug tx & FU visits | yes | TAU (advice to GP, referral possible) | Indiv. | Multiprof. | Level 5 | Long |
| Cullum et al. 2007 [57] | UK | Geriatrics | 121 | Assessment and treatment plan by C-L nurse, co-operation with other MH specialists, monitoring) | yes | TAU (referral possible) | Indiv. | Multiprof. | Level 4 | Adaptive |
| Davidson et al. 2010 [58] | USA | Heart disease | 237 | Assessment by clinical nurse specialist, monitoring and stepped-care approach (psychiatric tx and/or PT, counseling by SW) | yes | TAU ("as defined by the treating physicians") | Indiv. | Multiprof. | Level 5 | Adaptive |
| Huffman et al. 2011 [65] | USA | Heart disease | 175 | Assessment and treatment (incl. depression education) by social-work case manager collaborating with a psychiatrist | yes | TAU, CM informs physician & treatment team & recommends treatment | Indiv. | Multiprof. | Level 5 | Adaptive |
| Huffman et al. 2014 [64] | USA | Heart disease | 183 | Assessment and treatment planning by social-work case manager collaborating with a psychiatrist, psychoeducation, telephone-based CBT | yes | As Huffman 2011 | Indiv. plus group | Multiprof. | Level 5 | Adaptive |
| Kominski et al. 2001 [69] | USA | C-L (general) | 1687 | Psychogeriatric assessment, treatment by multiprofessional MH team coordinated by case manager | yes | TAU (referral possible) | Indiv. | Multiprof. | Level 5 | Adaptive |
| McCorkle et al. 2009 [75] | USA | Cancer (ovarian) | 123 | Assessment by C-L nurse, monitoring and supportive counseling from oncology advanced practice nurse  | no | TAU & attention control (contact with research assistant) | Indiv. | Nurse specialists | Level 5 | Long |
| Oslin et al. 2004 [78] | USA | Geriatrics | 2637 | Psychogeriatric assessment, case manager monitored symptoms and coordinated treatment by multiprofessional MH team | yes | TAU (referral possible) | Indiv. | Multiprof. | Level 5 | Adaptive |
| Rollmann et al. 2009 [79] | USA | Heart disease | 452 | Assessment by nurse specialist collaborating with psychiatrist and cardiologist, telephone-based monitoring of symptoms and counseling | yes | TAU (diagnosis, no treatment advice) | Indiv. | Multiprof. | Level 5 | Adaptive |
| Sneed et al. 1997 [85] | USA | Heart disease | 34 | Assessment & intervention (counseling, relaxation) by psychiatric nurse, weekly telephone after discharge by nurse case manager, c) 2 sessions support group | no | TAU w/ in-hospital cardiovascular case manager; after discharge: 24 hour beeper access to CM | Indiv., signify-cant others & group | Multiprof. | Level 4 | Long |
| Stiefel et al. 2008 [86] | Switzer­land | Rheumatism/ Diabetes | 247 | Assessment and multifaceted intervention by C-L nurse: Supportive counseling, referral to psychiatrist, and/or advice to treating physician/multidisciplinary case conference) | yes | TAU (usual care, referral possible) | Indiv. | Multiprof. | Level 5 | Adaptive |

1Level of Integration: According to the Standard Framework for Levels of Integrated Healthcare [24] (cf. also Table 1)

2short: 1-3 sessions; medium: 4-10 sessions; long: > 10 sessions; adaptive: intensity of interventions is adaptive to patients’ needs

CBT: Cognitive Behavioral Therapy; C-L: Psychiatric and psychosomatic consultation-liaison service; CM: Care manager; FU: Follow-up; PT: Psychotherapy; SSRI: Selective serotonin reuptake inhibitor; TAU: Treatment as usual (routine hospital care)

**Table S-5:** Risk of Bias for Individual Studies.

| **Study** | **Randomization** | **Allocation Concealment** | **Incomplete Outcome Data** | **Risk of Selective Outcome Reporting** | **Overall Risk of Bias1** |
| --- | --- | --- | --- | --- | --- |
| 1. **Brief interventions tailored to the patient**
 |
| Baldwin et al. 2004 [51] | Low Risk | Low Risk | Low Risk | Unclear Risk | Unclear Risk |
| Burton et al. 1995 [53] | Low Risk | High Risk | High Risk | Unclear Risk | High Risk |
| Callaghan et al. 2002 [54] | Unclear Risk | Unclear Risk | Low Risk | Low Risk | Unclear Risk |
| Cole 1991 [55] | Low Risk | Low Risk | High Risk | Unclear Risk | High Risk |
| Leon-Pizarro et al. 2007 [70] | Unclear Risk | Unclear Risk | High Risk | Unclear Risk | High Risk |
| McArdle et al. 1996 [74] | Unclear Risk | Unclear Risk | Unclear Risk | Unclear Risk | Unclear Risk |
| Roykulcharoen & Good 2004 [80] | Unclear Risk | Unclear Risk | Low Risk | Unclear Risk | Unclear Risk |
| Shah et al. 2001 [83] | Unclear Risk | Unclear Risk | High Risk | Unclear Risk | High Risk |
| 1. **Interventions based on specific treatment manuals**
 |
| Austin et al. 2007 [50] | Low Risk | High Risk | Low Risk | Unclear Risk | High Risk |
| Blumenthal et al. 2006 [52] | Low Risk | Low Risk | High Risk | Unclear Risk | High Risk |
| Given et al. 2004 [59] | Low Risk | High Risk | High Risk | Unclear Risk | High Risk |
| Gruen 1975 [60] | Unclear Risk | Unclear Risk | Unclear Risk | High Risk | High Risk |
| Guthrie et al. 1993 [61] | Unclear Risk | Unclear Risk | High Risk | High Risk | High Risk |
| Herrmann-Lingen et al. 2016 [62] | Low Risk | Low Risk | Low Risk | Low Risk | Low Risk |
| Hubschmid et al. 2015 [63] | Low Risk | Low Risk | Low Risk | Low Risk | Low Risk |
| Jantschek et al. 1998 [66] | Low Risk | Unclear Risk | Unclear Risk | Unclear Risk | Unclear Risk |
| Kalaitzi et al. 2007 [67] | Unclear Risk | Unclear Risk | Unclear Risk | Unclear Risk | Unclear Risk |
| Koertge et al. 2008 [68] | Low Risk | Low Risk | Low Risk | Unclear Risk | Unclear Risk |
| Lincoln & Flannaghan 2003 [71] | Low Risk | Low Risk | High Risk | Unclear Risk | High Risk |
| Linn et al. 1982 [72] | Low Risk | Low Risk | High Risk | Unclear Risk | High Risk |
| Mayou et al. 2002 [73] | Low Risk | Low Risk | Low Risk | Unclear Risk | Unclear Risk |
| Moorey et al. 1998 [76] | Low Risk | Low Risk | High Risk | Unclear Risk | High Risk |
| Napolitano et al. 2002 [77] | Unclear Risk | Unclear Risk | High Risk | Unclear Risk | High Risk |
| Schofield et al. 2016 [81] | Low Risk | Low Risk | Low Risk | High Risk | High Risk |
| Schweick­hardt et al. 2007 [82] | Low Risk | Low Risk | Low Risk | Unclear Risk | Unclear Risk |
| Simson et al. 2008 [84] | Unclear Risk | Unclear Risk | Unclear Risk | Unclear Risk | Unclear Risk |
| Watkins et al. 2007 [87] | Low Risk | Low Risk | Low Risk | Low Risk | Low Risk |
| 1. **Integrated and collaborative care**
 |
| Cole et al. 2006 [56] | Low Risk | Low Risk | High Risk | Unclear Risk | High Risk |
| Cullum et al. 2007 [57] | Low Risk | Low Risk | Low Risk | Unclear Risk | Unclear Risk |
| Davidson et al. 2010 [58] | Low Risk | Low Risk | Low Risk | Low Risk | Low Risk |
| Huffman et al. 2011 [65] | Low Risk | Low Risk | Low Risk | Unclear Risk | Unclear Risk |
| Huffman et al. 2014 [64] | Low Risk | Low Risk | Low Risk | Low Risk | Low Risk |
| Kominski et al. 2001 [69] | Unclear Risk | Unclear Risk | Unclear Risk | Unclear Risk | Unclear Risk |
| McCorkle et al. 2009 [75] | Low Risk | Low Risk | High Risk | Unclear Risk | High Risk |
| Oslin et al. 2004 [78] | Unclear Risk | Unclear Risk | Low Risk | Unclear Risk | Unclear Risk |
| Rollmann et al. 2009 [79] | Low Risk | Low Risk | Low Risk | Low Risk | Low Risk |
| Sneed et al. 1997 [85] | Low Risk | Low Risk | High Risk | Unclear Risk | High Risk |
| Stiefel et al. 2008 [86] | Low Risk | High Risk | Low Risk | Unclear Risk | High Risk |

1Overall risk of bias is a function of the highest risk of bias in any of the four categories.

**Table S-6**. Measures and Outcomes for the Studies Included in the Review.

| **Author, year** | **Depression Measure** | **Depression:d (95% CI)** | **Anxiety Measure** | **Anxiety:d (95% CI)** |
| --- | --- | --- | --- | --- |
| 1. **Brief interventions tailored to patients**
 |
| Baldwin et al. 2004 [51] | GDS-30 | -0.28 (-0.65, 0.09) |  |  |
| Burton et al. 1995 [53] | HADSD | NA | HADSA | -0.31 (-0.61, -0.01) |
| Callaghan et al. 2002 [54] |  |  | STAI-S | -0.42 (-0.83, -0.02) |
| Cole 1991 [55] | GDS-30 | NA | ASI | NA |
| Leon-Pizarro et al. 2007 [70] | HADSD | -0.54 (-1.04, -0.05) | HADSA | -0.55 (-1.04, -0.05) |
| McArdle et al. 1996 [74] | HADSD | -0.33 (-0.69, 0.02) | HADSA | -0.15 (-0.49, 0.19) |
| Roykulcharoen & Good 2004 [80] |  |  | STAI-S | -0.18 (-0.57, 0.21) |
| Shah et al. 2001 [83] | BAS-DEP; MADRS; GDS | NA |  |  |
| 1. **Interventions based on specific treatment manuals**
 |
| Austin et al. 2007 [50] | EPDS | 0.02 (-0.32, 0.38) | STAI-S | 0.03 (-0.33, 0.40) |
| Blumenthal et al. 2006 [52] | BDI | -0.33 (-0.55, -0.11) | STAI-S | -0.23 (-0.45, -0.01) |
| Given et al. 2004 [59] | CES-D | -0.25 (NA) |  |  |
| Gruen 1975 [60] | Physician notes | -0.46 (-0.92, 0.00) |  |  |
| Guthrie et al. 1993 [61] | BDI | NA |  |  |
| Herrmann-Lingen et al. 2016 [62] | HADSD | -0.05 (-0.21, 0.01) |  |  |
| Hubschmid et al. 2015 [63] | BDI | -0.19 (-0.83, 0.23) |  |  |
| Jantschek et al. 1998 [66] | BDI | 0.00 (-0.46, 0.46) | STAI-X2 | -0.05 (-0.52, 0.42) |
| Kalaitzi et al. 2007 [67] | CES-D | -0.77 (-1.41, -0.13) | STAI-S | -0.50 (-1.13, 0.13) |
| Koertge et al. 2008 [68] | BDI | 0.09 (-0.23, 0.41) |  |  |
| Lincoln & Flannaghan 2003 [71] | BDI | 0.02 (-0.36, 0.41) |  |  |
| Linn et al. 1982 [72] | POMS-Depression | -0.80 (NA) |  |  |
| Mayou et al. 2002 [73] | BDI | -0.26 (-0.72, 0.20) | STAI-S | -0.02 (-0.48, 0.44) |
| Moorey et al. 1998 [76] | HADS | -0.25 (-0.83, 0.32) | HADSA | -0.37 (-0.95, -0.21) |
| Napolitano et al. 2002 [77] | GHQ | -0.36 (-0.83, 0.11) |  |  |
| Schofield et al. 2016 [81] | HADSD | -0.37 (-0.59, -0.16) | HADSA | -0.09 (-0.36, 0.18) |
| Schweick­hardt et al. 2007 [82] | HADSD | NA |  |  |
| Simson et al. 2008 [84] | HADSD | -0.24 (-0.95, 0.48) | HADSA | -0.14 (-0.86, 0.52) |
| Watkins et al. 2007 [87] | MMSE | -0.26 (-0.50, -0.02) |  |  |
| 1. **Integrated and collaborative care**
 |
| Cole et al. 2006 [56] | HAMD | -0.18 (-0.75, 0.15) |  |  |
| Cullum et al. 2007 [57] | GDS-15 | -0.27 (-0.69, 0.16) |  |  |
| Davidson et al. 2010 [58] | BDI | -0.59 (-1.00, -0.18) |  |  |
| Huffman et al. 2011 [65] | PHQ-9 | -0.69 (-0.99, -0.38) | HADSA | -0.26 (-0.55, 0.04) |
| Huffman et al. 2014 [64] | PHQ-9 | -0.45 (-0.88, -0.02) | HADSA | -0.10 (-0.43, 0.23) |
| Kominski et al. 2001 [69] | MHI-D | NA | MHI-A | NA |
| McCorkle et al. 2009 [75] | CES-D | -0.55 (-0.91, -0.19) |  |  |
| Oslin et al. 2004 [78] | MHI-D | -0.02 (-0.13, 0.10) | MHI-A | -0.13 (-0.53, 0.27) |
| Rollmann et al. 2009 [79] | HAMD | -0.42 (-0.65, -0.19) |  |  |
| Sneed et al. 1997 [85] | POMS-Depression | 0.45 (-0.23, 1.13) | POMS-Anxiety | 0.39 (-0.29, 1.07) |
| Stiefel et al. 2008 [86] | CES-D | -0.29 (-0.60, 0.02) |  |  |

ASI: Anxiety Status Inventory; BDI: Beck Depression Inventory; CES-D: Center for Epidemiological Studies Depression Scale; DSI: Depression Status Inventory; EPDS: Edinburgh postnatal depression scale; GDS-15: Geriatric Depression Scale-15; GDS-30: Geriatric Depression Scale-30; GHQ: General Health Questionnaire; HADSA: Hospital Anxiety and Depression Scale: Anxiety; HADSD: Hospital Anxiety and Depression Scale: Depression; HAMD: Hamilton Depression Scale; MHI-D: Mental Health Inventory: Depression; MHI-A: Mental Health Inventory: Anxiety; MMSE: Mini-Mental State Examination; NA: not available, i.e. the value could not be calculated from available data; PHQ-9: Patient Health Questionnaire-9; POMS: Profile of Mood States; SRD: Zung Self-Rating Depression Scale; STAI-S: Spielberger State Trait Anxiety Inventory: State Component; STAI-X2: State Trait Anxiety Inventory: Trait Component)

**Figure S-1.** Study Flow Chart.



**Figure S-2.** Summary of Risk of Bias.



**Figure S-3**. Forest Plot for Studies Reporting Interventions Based on Specific Treatment Manuals with Depression as an Outcome.



\*Level of Integration (cf. Table 1)

\*\*Risk of Bias: 1 = low; 2 = unclear; 3 = high

\*\*\*Control: 1 = TAU; 2 = TAU with possible consultation (active control)

**Figure S-4**. Contour-Enhanced Funnel Plot for Studies Reporting Interventions Based on Specific Treatment Manuals Depression as an Outcome.



**Figure S-5.** Forest Plot for Integrated and Collaborative Care Studies with Depression as an Outcome.



\*Level of Integration (cf. Table 1)

\*\*Risk of Bias: 1 = low; 2 = unclear; 3 = high

\*\*\*Control: 1 = TAU; 2 = TAU with possible consultation (active control)

**Figure S-6.** Contour-Enhanced Funnel Plot for Integrated and Collaborative Care Studies with Depression as an Outcome.

