Cognitive Behavioural Therapy – Overview Protocol

In accordance with the guidelines, our overview of systematic reviews protocol was registered with the International Prospective Register of Systematic Reviews (PROSPERO) on 10th October 2017 (registration number: CRD42017078690).

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Contributions: BF is the guarantor. PS developed the protocol with BF. SH provided expertise on design and methodology. KH provided expertise on methodology in particular panoramic meta-analysis. JH provided expertise in methodology especially generalisation framework. SK developed the draft search strategy plan and SL provided expertise in all areas of design, methodology and rigour. All authors read, provided feedback and approved the final manuscript.

Support: This overview of systematic reviews is funded by the National Institute for Health Research, Health Technology Assessment Programme (funding reference number HTA 15/174: Cognitive Behavioural Therapy: An overview of systematic reviews and meta-analyses).

The Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (University of Oxford) is the sponsor of this overview of systematic reviews.

The NIHR HTA programme is funding this overview of systematic reviews. They will provide funding to NDORMS (University of Oxford) who will carry out the research and store the data. The NIHR HTA programme is not involved in any other aspect of the project design, data collection or analyses. They will be made aware of the findings at milestones throughout the project.

Contents

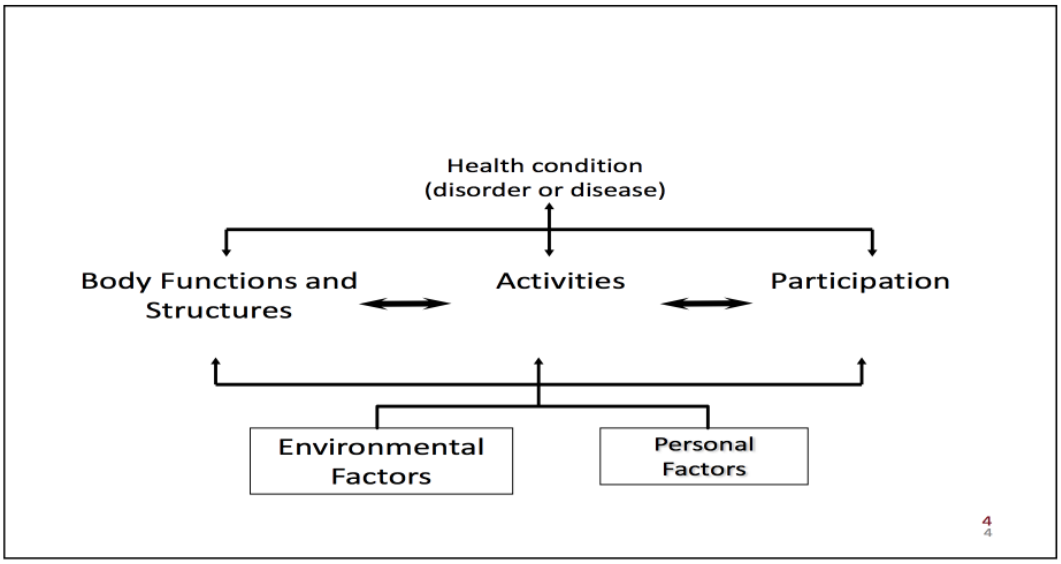
Introduction

Cognitive Behavioural Therapy (CBT) considers how we think (cognitions) about a situation and how this affects the way we act (behaviours), feel (emotions) and how our body responds (physical response). The relationships between all these components are considered bidirectional[1,2]. There are many variants of CBT. Most CBT is delivered in adherence with CBT process manuals specific to the health problem and are technique-driven. Roth and Pilling, on behalf of the Department of Health, developed a set of core competencies for CBT and included a division between high and low intensity CBT [3]. They defined high intensity as formal CBT with a CBT-trained health professional predominantly delivered face to face in an individual or group format. Low intensity interventions focus on patient self-help and can be delivered by health professionals with very little to fairly comprehensive CBT training and via several platforms (internet, phone, paper-based). This distinction can become less clear in some forms of CBT, called "blended care", where high intensity therapy is combined with low intensity self-help methods.

CBT has been evaluated with randomised control trials (RCTs) in numerous mental and physical health problems with older adults, adults, young people and children. The RCTs have been synthesised into systematic reviews and meta-analyses of the evidence. In 2004 an overview of CBT meta-analyses included n=269 reviews [4]. Our scoping work suggests we could identify upwards of n=500 systematic reviews of CBT.

This overview hopes to explore the effects of CBT across all populations, all health problems and across all settings. We have drawn upon the World Health Organisations (WHO) International Classification of Functioning, Disability and Health (ICF) model [5] and classification system (ICD-11: launch date June 2018[6]) figure 1 to guide the overview process.

Figure 1: WHO ICF model (2001)[5]



The WHO ICF model guides research to conceptualise health and disability within a biopsychosocial model of understanding. A health problem does not only produce effects upon bodily functions but also upon an individual's activities and participation. For example, living with anxiety will impact an individual's emotional functions which can reduce their ability to chat to colleagues at work (activity) which stops them from being involved with work social life (participation).

Our scoping review suggests that the majority of systematic reviews of CBT include outcomes pertaining to the functional domain of this model (e.g. mental functions, sensory function and pain, metabolic functions, neuro-musculoskeletal functions, skin functions, etc.). This overview aims to collect both measurements of health related quality of life (HRQL) and measurements of function across CBT reviews. By examining HRQL, we hope to capture, to some degree, the influence of CBT upon patients' activities and participation in addition to understanding the intervention's impact upon the problem-specific functional outcomes. We hope this will enable us to gather meaningful data across sub-groups of patients (age categories, severity of symptoms) as to how effective CBT has been for the individuals' overall health and wellbeing.

Evidence suggests that short term changes to function as a result of CBT do not guarantee long term changes[7,8]. We shall therefore emphasise the importance of long term (>=12 month follow-up) above short term (<12 month follow-up). We are reliant upon the level of detail which a review reports regarding follow-up times. If they note where the follow-up time is pegged to either from randomisation or from end of treatment then we will report this detail.

We anticipate finding over 500 reviews of CBT. This evidence base can be overwhelming to communicate the key messages to patients, the public, clinicians, researchers and research funders and therefore we plan to provide a comprehensive cross section of the available evidence. We believe this will provide a clear picture of where CBT should or should not be used clinically and where we do or do not need to develop further research.

Aim

The overarching aim is to map for which populations there is / is not a systematic review of RCTs examining CBT and how well these reviews were conducted. Within each population we will identify (a) the need for new or better quality systematic reviews or RCTs or (b) that CBT worsens/does not alter/improves HRQoL, depression, anxiety and the most commonly evaluated physical/physiological health outcome in comparison to active or not active control conditions in the short or long term follow-up period.

In addition, we will explore the potential for generalising existing evidence of effects to other health problems where there is currently insufficient systematic review evidence. Finally we will recommend where further CBT efficacy/effectiveness research could fill the gaps identified from our mapping exercise (e.g. in primary RCTs, health problem specific reviews or indirect comparisons).

Objectives

The objectives will be to complete:

(1) Mapping
   a. Produce a map of the volume of systematic review evidence across all health problems.
   b. Map the review data by health problem as classified by the ICD-11 (depending on the data this will be primary or secondary level of categorisation).
   c. Map by what has and has not been examined and with what level of confidence (Assessing the Methodological Quality of Systematic Reviews version.2: AMSTAR-2[9]) across the included systematic reviews regarding patient sub-groups, setting, CBT format and which outcomes have been reported at the review level.
   d. Map systematic review evidence regarding CBT's effectiveness/harm upon generic (HRQoL) and specific functions (Depression, Anxiety and problem specific outcomes) within health problem categories.

(2) Synthesis
    a. Synthesise and consider for inclusion within a panoramic meta-analysis, systematic review evidence across all health problems where a meta-analysis has been conducted upon the following common outcomes (these were selected from our preliminary scoping work and in alignment with the ICF model):
        i. Health related quality of Life
        ii. Depression
        iii. Anxiety
        iv. Problem specific reviews.
        v. There may be additional groupings which could be synthesised; we shall consult the ECG and the Health Technology Assessment board (HTA) before proceeding with any additional syntheses.
    b. Conduct panoramic meta-analysis on suitable reviews.
(3) Sub-group analysis
    a. Sub-group analysis, where possible, to explore high versus low intensity CBT (as defined by Roth and Pilling, 2007[3]) for a health problem.
(4) Stratified analysis
    a. (1) stratifying by comparator group (Active Vs No Active)
    b. (2) by follow-up time (short <12 months and long >=12 month follow-up)
    c. Age (Children and Adolescents, Adults, Older Adults)
(5) An assessment of the generalisability of the available evidence. We will seek expert opinion (ECG) on health problems that are sufficiently similar to make sensible and meaningful comparisons. We will use an established framework model to investigate the extent to which generalisation of evidence can be justified across health problems where evidence is currently lacking.

Throughout we will seek advice from our ECG and we will use methods from the nominal group technique in order to ensure an appropriate balance between external advice and unwarranted influence and bias being introduced into the selection, grading, presentation and interpretation of evidence.

Methods

We shall perform three stages within this overview. Stage one is to identify all the available systematic reviews of CBT, which include RCT evidence then to map the available evidence along with a quality assessment of the included reviews. The second stage will be to meaningfully synthesis the evidence by common outcomes across health problems and to specifically examine the comparative effectiveness of high and low intensity CBT. Finally we will examine the generalisability of the evidence across health problems/populations/settings etc. We hope to identify populations which are sufficiently similar in terms of the mechanisms of action for CBT to produce positive, negative or no effect to suggest that evidence could be generalised from one population to another.

We are working with a CBT expert consultation group (ECG) consisting of clinical academics (n=7), research academics (n=9) and service users (n=4). We meet with this group face to face twice and communicate via phone/email throughout the overview process to guide our protocol development, synthesis strategy, generalisation and interpretation. We hope the ECG will guide our overview to produce clinically meaningful outputs. The group will not be involved in any of the data extraction or quality assessment to ensure no undue influence.

Stage one: Mapping the evidence

This stage will detail how we will identify and select the systematic reviews for inclusion in order to generate a comprehensive map of the evidence.

Eligibility criteria

To be included in the evidence map and overview of systematic reviews, studies must meet the following criteria:

Type of studies

We will include systematic reviews of randomised control trials (RCTs) which evaluate the effects of CBT. We will include systematic reviews which include both randomised and non-randomised trials so long as the review has reported the RCT evidence independently. To be included, systematic reviews must fulfil a minimum of 4 methodological criteria as defined by the Centre for Reviews and Dissemination, University of York, as part of the Database of Reviews of Effects (DARE) database (http://www.crd.york.ac.uk/crdweb) [11]:

(1) inclusion/exclusion criteria reported;

(2) Adequate search strategy;

- Adequate indicates: names of the database(s) searched should be stated and details given of the search terms used (or where these can be obtained), date and language restrictions, hand-searching, attempts to identify unpublished material, and contact with authors, industry, and research institutes.
- One named database plus any of the following:
    - Checking references.
    - Hand-searching (searching of a journal page by page, i.e. by hand, to identify relevant studies).
    - Contact with researchers to identify unpublished studies.
    - Citation searching (uses a known reference to search forward in the literature to locate further articles which cite that reference in their bibliographies).
    - Internet searching.
    - Other systematic attempts to identify potential studies may be referred to; if unsure whether a method reported is appropriate, check with an information specialist

(3) Included studies synthesised

- Narrative or quantitative synthesis

(4) Quality of the included studies assessed

- Use of a tool or specified criteria used for assessing quality

(5) Sufficient details about the included studies reported.

- Sufficient indicates: The minimum study details (details of the population/setting, intervention and a result for each included study) were provided for all studies that met the inclusion criteria, either in tables and figures or the text of the review (including online-only appendices).

Type of participants

We will include systematic reviews of RCTs, which include data from all age groups including children, adolescents and adults. Within these age categories participants can be any gender. We will include all health problems recognised within the ICD-11 and their alternative nominal categorisation. For example ICD-11 uses the term 'disorders of intellectual development' whereas reviews may refer to 'intellectual disability.'

Setting

We will include systematic reviews of RCTs that have been conducted in any context including community settings, primary care, secondary care, hospital settings, etc. and across any country.

Intervention

We will only include systematic reviews where Cognitive Behavioural Therapy (or other CBT synonyms) has been explicitly reported in the review title or abstract.

We will include all formats of CBT including high and low intensity CBT reviews. High intensity will be defined as using a relatively specialist trained CBT therapist and low intensity is all other types of CBT (blended care, guided self-help, internet-based, structured exercises or brief interventions) These can be with a relevantly trained individual (not fully trained CBT therapist). We must be able to extract the RCT CBT data summary independently.

Comparator

We will include systematic reviews if they explore comparisons of CBT to either: 1) Active: a non-CBT comparator intervention (e.g. other psychological, behavioural, pharmacological interventions) 2) No Active: no intervention, waitlist control, placebo or treatment as usual or (3) Another format of CBT (e.g. computerised CBT versus face to face).

Outcomes

We will include systematic reviews which report information on at least one of the following patient or other reported outcomes:

- Health related quality of life outcomes
- Depression
- Anxiety
- Health problem specific outcomes
    - Psychosis
    - Physical/physiological outcomes

We will include reviews which use recovery rates from psychological, physical/physiological symptoms. If a review's outcomes include proposed CBT mechanisms of action such as brain imaging, cognitive changes or cortisol levels we shall include these reviews in a separate category for informing our generalisation framework.

We will include reviews with short (<12 months) and long term (>=12 months) outcomes.

Restrictions

We will only include systematic reviews written in English.

Information sources

Our method of identifying systematic reviews will be conducted in line with the Cochrane Handbook for Systematic Reviews of Interventions [12] and recommendations for conducting Overviews of Systematic Reviews [13].

A comprehensive search strategy was designed comprising of free-text and controlled vocabulary terms identified by the ECG and from key papers from our preliminary scoping searches of systematic reviews on CBT. We tested and chose the SIGN systematic review filter from the Scottish InterCollegiate Guidelines Network available on the InterTASC Information Specialists' Sub-Group (ISSG) website[14], which was used across Medline, Embase and CINAHL. We used the McMaster's filter within PsycInfo. Our MEDLINE search strategy is attached in Appendix A. This strategy has picked up our 18 sensitivity check papers, plus 18 further sensitivity check papers (Appendix B) from a previous overview of CBT [4]. The strategy was adapted and checked for use across each of our selected databases.

The search strategy will be run across the Database of Abstracts of Reviews of Effects (DARE: up to March 2015), the Cochrane Library of Systematic Reviews, MEDLINE, EMBASE, PsycInfo, CINAHL, Child Development and Adolescent Studies (CDAS) and OpenGrey. This list was compiled by testing and searching the specificity and inclusivity of several databases and with the guidance of the ECG.

Although reviews and meta-analysis of CBT have been conducted since as early as 1977 (e.g. DiGuiseppe, Miller, & Trexler 1997[15], Miller and Berman 1983[16]), these were not systematic reviews employing systematic methodological rigour in identification of studies and synthesis of evidence. Systematic review methodology has improved since the foundation of the Cochrane Collaboration in 1993 and publication of the handbook to support review authors in May 1994. The earliest review examining the effects of CBT for multiple health problems was by Butler and colleagues in 2006[17]. They searched several databases from 1967 to July 2004 and where more than one review was identified for a particular condition, the most extensive and methodologically rigorous review was included. The earliest year of publication of the included reviews was 1992 indicating that reviews prior to this timeframe have been superseded. We have therefore decided to limit our database search from 1992 to present (26 years).

We will note if a review was published more than 5 years ago as this might need updating. However, the ECG decided that we do not have the resources to perform searches in order to assess whether a review does or does not need updating as based on Garner et al's[18] guidance.

Due to the anticipated large volume of potential reviews for inclusion the ECG advised us not to perform reference list checks of included reviews.

We will perform an update search 12 months after the initial searches have been run to check for any additional systematic reviews which have been published in the intervening months (anticipated date for update search: April 2019). When we begin to write our overview discussion and conclusions we will search the Cochrane database for protocols on on-going systematic reviews in order to inform whether some of the 'gaps' we identify are likely to be answered in the near future.

Study records

Data management

Search results will be exported into Endnote for de-duplication. Once any duplicate records have been excluded, the search results (title and abstract) will be exported into Covidence, which is a web-based

software tool for study screening and data extraction of systematic reviews and is recommended by Cochrane [19]. The full-text of reviews shortlisted for full text analysis will also be uploaded to Covidence.

Selection process

Screening

Two reviewers (PS and KE) will independently screen all titles and abstracts for potentially eligible reviews, using the abstract screening questionnaire (Appendix C) which is based on the predefined eligibility criteria.

Eligibility

We will obtain full-text reports of those reviews selected for inclusion or for any uncertain cases. The same two reviewers will independently perform review selection with the full text screening questionnaire (Appendix C). We will not contact authors for clarification or additional data as the scope of the project is too large to accommodate this. We will resolve any disagreements regarding the inclusion or exclusion of individual reviews by discussion or, if necessary, will consult a third reviewer (BF).

Inclusion

The search process and study identification will be documented in a figure as recommended by PRISMA statement[21]. This will result in a final list of included and excluded systematic reviews along with reasons for exclusion (see Appendix C). This process will not be blinded so all reviewers will be able to see the authors and their affiliated institutions.

Data collection process

A bespoke data extraction form was developed with input from the ECG. This form was piloted by two reviewers (BF and PS) on the 20 reviews which the ECG identified to be included in the sensitivity check (Appendix B) for the search strategy and revised accordingly.

Data extraction: Two reviewers (PS and KE) will extract review and Population, Intervention, Comparator, Outcome, Study Design (PICOS) and follow-up time details from the included reviews. They will note if the review includes a meta-analysis upon either HRQoL, Depression, Anxiety or a health problem specific outcome. They will also perform the AMSTAR-2 quality assessment. PS and KE will perform this for all included reviews and then BF will compare and produce a final data extraction sheet. This information will be entered into a review database.

Assessment of methodological quality of included reviews

Each systematic review will be assessed independently by the two reviewers (PS and KE) using the AMSTAR 2[9] tool for the methodological quality assessment for systematic reviews of randomised and non-randomised control trials. We will not reassess the quality of the individual included RCTs but rely on the author's assessment (if conducted). We will calculate the rate of agreement between the two reviewers and report. We will resolve any discrepancies by consensus and when agreement cannot be reached a third overview author (BF) will consider the paper and make a majority decision. The tool consists of 16 items and has good face and content validity for measuring the methodological quality of systematic reviews. The answer to each question will be recorded on the data extraction sheet. We will produce a table of the AMSTAR-2 scores. Guidance suggests there are seven critical domains within the AMSTAR-2 items[9]:

1. Protocol registered before commencement of the review (item 2)

2. Adequacy of the literature search (item 4)
3. Justification for excluding individual studies (item 7)
4. Risk of bias from individual studies being included in the review (item 9)
5. Appropriateness of meta-analytical methods (item 11)
6. Consideration of risk of bias when interpreting the results of the review (item 13)
7. Assessment of the presence and likely impact of publication bias (item 15)

This paper suggest categorising a review with 'high' confidence in the results of the review if we find no critical weakness and no or only one non-critical weakness is rated; 'moderate' confidence if more than one non-critical weakness with no critical weakness (however if there are multiple non-critical weaknesses then we might downgrade to low); 'low' if there is one critical weakness with or without non-critical weaknesses and 'critically low' if there is more than one critical weakness with or without non-critical weaknesses[9].

Data items

The information extracted for each review at stage one will include:

- Review identification details
    - Review author and date of publication *[a review will be flagged if older than 5 years]*
    - Sifting information
    - Aim of review
    - Design and number of included primary studies
    - Risk of Bias tool used
- Participant details
    - Report the review's identification of the participants' primary health problem
    - Report the review's identification of the participants' secondary (if applicable) health problem
    - Severity (Select one or more from: mild, moderate, severe or not specified)
    - Age category (Select one or more from: children, adolescents, young people, adults, older adults, not reported, other (free text detail)
    - Other characteristics reported (e.g. gender, ethnicity)
- Intervention group details
    - CBT intensity category (Select one from: high, low, combined, not reported)
    - CBT intervention details
    - Number of RCTs [number of participants]
    - CBT session details [number of sessions, frequency, duration] *aggregated or range across review*
- Control group details
    - Control category (chose one of Active, No Active, not reported)
    - Control group details
    - Number of RCTs [number of participants]
    - Other details
- Setting
    - Select one or more from (1) community (2) primary (3) secondary (4) hospital (5) institution (6) mixed (7) not reported (8) other
        - Number of RCTs
    - Select from (1) preventative (2) preventative for relapse (3) early intervention (4) standard treatment (5) mixed (6) not reported (7) other

    - Countries included
        - Number of RCTs
- Outcomes
    - Health related quality of life [If examined either report category name or no evidence found, If not examined report: not examined]
        - How measured [name(s) of instruments]
        - When measured [pegged time point]: report
            - Short (if the majority (>=50%) of the included RCTs report a follow-up time of less than 12 months) or
            - Long (if the majority of included RCTs report a follow-up time >12months) or
            - Unknown
            - Report if the review reports whether the follow-up measurements were pegged to post-randomisation or post-intervention
        - Number of RCTs [number of participants]
    - Repeat for Depression, Anxiety and physical/physiological outcomes
    - List all other outcomes reported in systematic review

Data mapping

Overall map: We will produce a Bubble map[22] to represent the volume of systematic review data across all physical and mental health problems. The map will denote the total number of reviews (size of bubble), the total number of participants included in the reviews (y axis), the number of RCTs (x axis) by the primary physical or mental health (ICD-11 primary/secondary category) problem the review targets.

Mapping by health problem: Summary tables will present included review details grouped by ICD-11 categories. Information will include Intervention details, comparison group details, follow-up period, outcomes measured, effect size and confidence intervals for primary outcome / outcome pertaining to aim of review, number of RCTs, AMSTAR-2 rating, age and country. Within each health problem category we shall order reviews firstly by those which compared CBT to an active comparator and secondly those where it is compared to a non-active comparator.

Table 1: Example for the Health Problem summary tables using Schizophrenia CBT reviews (example data)

Study ID	**Indication (ICD-11)**			**Age**	**Intervention CBT**		**Comparison control groups**	**Outcome**				**No RCTs [No.pts]**	**AMSTAR-2**
	Primary	**Co-morbid**	**Specific symptoms**		**High/ Low/ combined**	**Description**		**Follow-up**	**Psychological**	**Physical**	**HRQL**		
xxxx et al (2017)	Schizophrenia [F20]	/	Auditory hallucinations [R44.0]	Adults	High	Group CBT, 'torch' CBT	**Active 2/2** (other psychological)	Short mean 9 months	1. Psychosis (GRADE High) RCTs 2/2	Not Measured [NM]	NM	N=2 [n=108]	High
xxxx et al (2016)		/	/	Adults	High	CBT-p: group and individual, some used targeted focus other general	**No Active** No active 6/10 Active 4/10 (other psychotherapy)	Short mean 5.5 months	1. Psychosis (GRADE high) RCTs 10/10 2. Depression (GRADE high) RCTs 6/10 3. Anxiety (GRADE high) RCTs 4/10	NM	NM	N=10 [n=631]	moderate
xxxx et al (2015)		/	/	Children adolescents, young people	High	Individual and family CBT	**Active** Active 4/7 No active 2/7 Other CBT 1/7	Long mean 20 months	1.Psychosis 2.depression, 3.psycho-social functioning	Weight gain	NM	N=7 [n=699]	low

Mapping by review details: The availability of the evidence will also be described by the following: (1) severity (mild, moderate, severe), (2) who (children, adults, older adults), (3) how (CBT intervention details), (4) when (prevention, standard treatment, relapse prevention etc), (5) where (primary, secondary, hospital setting), (6) psychological outcomes, (7) physiological outcomes and (8) HRQoL outcomes. Table 2 aims to show the areas where systematic reviews have looked and where they have not. We propose to use the confidence ratings of AMSTAR-2[9] to code reviews with 'high confidence' (green), 'moderate confidence' (yellow), 'low confidence' (amber) and 'critically low' (red)[23]. This aims to give some direction as to the level of confidence

Table 2: Example for Patient sub-group, CBT-type, context and outcome table

Health Problems			Study ID	Severity			Who			How			When				Where				Follow-up		
Primary ICD-11 category	Specific problem	Co-morbidity		Clinical diagnosis	Sub-clinical	Severe	Child/ Adolescent	Adults	Older Adults	High Intensity: Indiv	High Intensity: Group	Low intensity	Prevention	Relapse Prevention	Early Intervention	Standard Care	Community	Primary care	Secondary care	Inpatient	Short	Long	Combined
2. Neoplasms	Breast cancer	NA	Ernst 2006	CL			Not reported				CL					CL	Not reported					CL	
5. Endocrine, nutritional or metabolic	Diabetes	Dep-ression	Elliott 2012	Not reported				CL		CL						CL			CL			CL	
	O/Weight Obesity	Schiz-ophrenia	Hjorth 2014	CL				CL			CL					CL	Not reported				CL		
	Weight gain	Smoking	Farley 2012	Not reported				M		M						M	M					M	
7. Sleep-Wake	Insomnia	NA	Cheng 2012	L				L				L				L	Not reported				L		
8. Nervous system	Chronic Fatigue Syndrome	NA	Cleare 2015	Not reported			CL	CL		CL	CL	CL				CL	Not reported					CL	
		NA	Gillings 2007	Not reported				L		L						L	Not reported					L	
	Epilepsy	NA	Cross 2015	Not reported			CL	CL		CL						CL	Not reported				CL		
	Headache / migraine	NA	Harris 2015	L					L	L	L					L		L				L	
11.Circulatory system	Heart Disease	NA	Goulding 2010	M				M		M						M			M	M	M		
13 Digestive system	Irritable Bowel	NA	Ford 2014	Not reported				M				M				M		M	M	M	M		
	Oral Mucositis	Cancer	Clarkson 2010	Not reported				H		H						H	Not reported				H		
14. Skin	Atopic Dermatitis	NA	Childa 2007	CL				CL		CL						CL	Not reported					CL	

Stage 2: Synthesising the evidence

From the evidence maps populated in stage one we shall focus on the common outcomes examined within the included reviews. Stage two is to identify systematic reviews which we can synthesis to identify generic and specific effects of CBT across and within health problems.

Outcomes and prioritisation

Primary outcome

This overview will prioritise long term (>=12month follow-up) effects of CBT upon HRQL outcomes. CBT is predominantly used in chronic health conditions (e.g. depression) where there is often no ambition to totally 'cure' the problem rather the aim of the intervention is to improve HRQL by reducing symptoms and increasing positive coping strategies. In focussing on HRQL this effect can be examined across multiple health problems and hopes to captures more information regarding the effect of CBT upon a person's 'activity' and 'participation' within a broader biopsychosocial model of health and disability[5].

Secondary outcomes

Our preliminary work suggests depression and anxiety to be the most common primary outcomes reported in reviews of CBT. Therefore we will examine the long term effects (>=12 month follow up) of CBT on depression, anxiety and the most commonly reported physical/physiological outcome across all included reviews. We think this will be important as HRQL outcomes maybe insensitive to some changes in health problem specific symptoms. We also noticed in our preliminary scoping review work that many reviews of CBT do not include a HRQL outcome.

Where no long term (>= 12 month) follow-up data is available we shall present the longest follow-up point available or the time point where the meta-analytic synthesis was performed. If there are separate analyses for several measurements of the same outcome then we will chose the analysis with the largest number of RCTs included. If they are equal then we will select the analysis of the measurement with the best psychometric properties.

We shall always extract data on HRQoL, depression and anxiety. For each primary ICD-11 level physical health problem and secondary ICD-11 level mental health problem we shall extract information on the health problem specific outcome. For example, for the secondary ICD-11 level health problem of Schizophrenia we shall extract data on the outcome of 'Psychosis.' If, in addition to or instead of HRQoL, depression and anxiety, there are multiple psychological and physical/physiological outcomes we will make a list of all available outcomes reported. If we find an additional common outcome, deemed meaningful by the ECG, which we have not focused on we can return to the review and extract this information.

If there are separate analyses for different classifications of response to treatment (response, recovery, relapse, remission) for the same outcome. We shall chose

- That which is identified as the primary outcome
- The analysis with the highest GRADE score (if available)
- The analysis which includes the greatest number of RCTs

Where available we will descriptively report the descriptions of mechanisms of action, patient satisfaction, adverse events and economic outcomes.

Selection process

The reviews will be grouped by outcome (HRQoL, Depression, Anxiety and health problem specific outcome). Then filtered by primary health problem addressed by the review. Within this grouping, if we identify two or more reviews which share the same primary RCTs we will use the criteria hierarchy employed by an ECG member (Hemming) in a previous overview project[20] to choose one review for inclusion into the overview:

1. Which has the highest AMSTAR-2 rating? (if equal proceed to criterion 2)
2. Which is most recent? (if equal proceed to criterion 3)
3. Which has the larger number of studies included?

We shall return to the full text of reviews that are selected and extract effect sizes, confidence intervals and heterogeneity measures. For effect sizes based on continuous outcome measures, the combined intervention/control group means, standard deviations and the total number of participants per group shall be extracted. For binary outcomes we shall extract from the combined intervention/control group the number of participants who have achieved the desired outcome plus the total number of participants.

The selected reviews will be examined to identify those with moderate clinical, design and statistical homogeneity. Statistical heterogeneity in treatment effect estimates between health problems will be explored using the I^2 statistic (moderate to low heterogeneity I^2 less than 75%); clinical heterogeneity will be explored through discussion with the ECG using the generalisation framework; and design heterogeneity explored using AMSTAR-2 scores.

We shall repeat this process for all reviews which include a depression outcome and an anxiety outcome. We will list all the physical/physiological outcomes which have been examined across all of our included reviews. The outcome which is the most common will be identified as the fourth outcome for selection in the overarching analysis.

Synthesis

We will synthesise these reviews and provide pooled treatment effects for all reviews which include a (1) HRQoL outcome, (2) Depression outcome (3) anxiety outcome and (4) health problem specific outcome. An example of the synthesis by HRQoL is presented in table 3.

Table 3: Table 3: Example quality of life synthesis table

Study ID	Primary health problem	CBT high/ low / combined	Control type	Follow-up range (months)	No. RCTs [No. Pts]	Summary statistic [95% CI]	I^2	Forest plot	GRADE	AMSTAR-2
xxxx et al (2016)	Schizophrenia	High	Active	Short 6-12 months	N=10 [n=631]	-0.86 [-2.38 – 0.65]	NR	- favours CBT	Moderate	Moderate
xxxx et al, 2015	Schizophrenia	High	No active	NR	N=1 [n=41]	-3.26 [-3.94 - -2.59]	n/a	- favours CBT	NR	Moderate
xxxx et al, 2015	Diabetes	High	No active	Short 0.5 – 8 months	N=27 [n=3084]	-1.22 [-1.51 - -0.94]	92 %	- favours CBT	High	High
xxxx et al, 2017	Diabetes	High	No active	Short 8-12 months	N=8/12 [n=333]	-0.26 [-0.41 – 0.10]	44 %	- favours CBT	Moderate	Low
xxx et al, 2016	Anxiety	Low	No active	Long 12-36 months	N=9 [n=601]	-0.46 [-0.86 - -0.06]	NR	- favours CBT	NR	Moderate
xxx et al, 2015	PTSD	Low	No active	NR	N=1 [n=41]	-3.26 [-3.94 - -2.59]	n/a	- favours CBT	NR	critically low
Xxx et al, 2010	Alcohol abuse	Combined	Active	NR	N=1 [n=41]	-3.26 [-3.94 - -2.59]	n/a	- favours CBT	NR	low
xxx et al, 2015	Post-natal depression	Combined	Active	short 6-12 months	N=2 [n=105]	-0.86 [-2.38 – 0.65]	0%	- favours CBT	High	High
xxx et al, 2017	Low back pain	Combined	Active	Long 12-36 months	N=9 [n=601]	-0.46 [-0.86 - -0.06]	NR	- favours CBT	Moderate	Low
xxx et al, 2016	Fibromyalgia	Combined	active	NR	N=1 [n=41]	-3.26 [-3.94 - -2.59]	n/a	- favours CBT	Low	Moderate

Green = high confidence, yellow = moderate confidence, amber = low confidence and red = critically low confidence.

This formal quantitative data synthesis will be undertaken using a two-step frequentist approach to a PMA. This method provides a single pooled estimate of the treatment effect along with estimates of degree of heterogeneity between reviews. This allows for both between study variability within the health problem (if random effects meta-analysis was used in the original indication review) and between health problem variability (using random effects), but does assume exchangeability of treatment effects.

We will perform this process for the outcomes of HRQoL, depression, anxiety and the most common physical/ physiological outcome. As we have collected other psychological and physical/physiological outcomes we will remain flexible and will consider additional synthesis suggested by the ECG.

We will enter pooled effect estimates from meta-analyses and we will enter single RCT effect estimates if there is only one CBT RCT reported within a systematic review.

Sub-group analysis:
For each health problem we will perform a sub-group analysis comparing:

- CBT Intensity
    - Reviews which include RCTs with high intensity CBT
    - Reviews with low intensity CBT
    - Reviews with a mixture of high and low intensity CBT RCTs.

In addition, if we find reviews which directly compare high and low intensity CBT within the review we shall group these and if possible pool the results; comparing high to low intensity CBT groups rather than intervention to control groups.

Stratified analysis
We will stratify analyses for:

- Age
    - Child and adolescent
    - Adults
    - Older adults
- AMSTAR-2 classification
    - Critically low + Low
    - Moderate + High
- Follow-up period
    - Long (>=12 months)
    - Short (<12 months)
- Control group
    - Active
    - No Active
-

Publication biases
This will be assessed per outcome therefore if we have more than 10 systematic reviews per outcome (HRQoL, Depression, Anxiety and the most common physical outcome) then the evidence of funnel plot asymmetry will be assessed using both the funnel plot and the Egger test using a conservative P-value of 0.1 to acknowledge the low power of this test.

Stage three: Generalisation framework

To explore the question of whether generic CBT effects (established for certain populations/indications) could be generalised across to other populations/indications we will generate a generalisation framework. We will use a generalisation framework based on that developed by Howick, Glaziou and Aronson[24] but adapted for CBT with our ECG and lead by Howick. The framework uses a set of requirements for the clinical homogeneity necessary to justify proposed generalisation across:

- populations
- indications
- contexts

We will highlight that the recommendations from generalisation will carry less weight than recommendations supported by direct systematic review evidence.

Economic evaluation

We do not plan to specifically search for systematic reviews focussed on the health economics of CBT. However, if there are economic analyses embedded within the reviews which we include then we will extract the basic descriptive information. We will provide a written summary of this evidence but no further analysis. We will highlight evidence from the main overview synthesis which could impact future economic analyses.

Summary

We are sensitive to the importance of not overstating conclusions representing CBT as being effective or not and to accurately reflect where further research, whether primary or secondary analysis work is needed. We will caveat all summary statements and recommendations with the limitations of the methodology but treat this as a necessary step in addressing the current state of the CBT evidence base.

The mapping exercise will identify in which health problems, across which sub-groups, contexts and with what format, CBT has been evaluated, thereby identifying gaps which have not been examined with a high quality systematic review.

The synthesis stage can identify if CBT can produce long term changes in quality of life. It will also present, with varying degrees of confidence, where CBT does or does not produce generic or problem-specific long term changes upon specific functions.

By using the generalisation framework, we can justify where we could generalise evidence to fill some of these evidence gaps.

We will search Prospero, ClinicalTrials.gov and ICTRP to identify on-going trials or systematic reviews which have addressed the areas we recommend for further research. This summary will lead to a set of recommendations regarding the prioritisation of primary or secondary research into areas where we cannot generalise the clinical effectiveness findings and the evidence base is weak.

Dissemination plan

We plan to publish a paper detailing the generic effects of CBT upon HRQoL, depression, anxiety and the most commonly found physical/physiological outcome. When there is sufficient data we will publish health problem specific overview papers. We also aim to publish the generalisation framework methodology and findings. We hope to present the findings at international conferences to make sure the information is communicated to the patient population perhaps via patient conferences and/or social media.

References

1. Grazebrook KaG, A. What are cognitive and/or behavioural psychotherapies. UKCP/BACP Mapping psychotherapy exercise. . 2005.
2. Mansell W. The seven C's of CBT: A consideration of the future challenges for cognitive behaviour therapy. *Behavioural and Cognitive Psychotherapy.* 2008;.36(6):pp.
3. Roth A, Pilling S. *The competencies required to deliver effective Cognitive and Behavioural Therapy for people with Depression and Anxiety disorders. .* London: Department of Health.; 2007.
4. Hofmann SG, Asnaani A, Vonk IJ, Sawyer AT, Fang A. The efficacy of cognitive behavioral therapy: a review of meta-analyses. *Cognitive therapy and research.* 2012;36(5):427-440.
5. Organization WH. World Health Organization: International Classification of Functioning, Disability and Health (ICF). 2001.
6. Organisation WH, Inventor. ICD-11 Classifications of Mental and Behavioural Disorder: Clinical Descriptions and Disgnostic Guidelines. . 2018 (June).
7. Durham RC CJ, Power KG, Sharp DM, Macdonald RR, Major KA, et al. Long-term outcome of cognitive behaviour therapy clinical trials in central Scotland. *Health Technol Assess.*9(42).
8. Perlis RH. Cognitive behavioural therapy has short term but not long term benefits in people with residual symptoms of depression. *Evidence-based mental health.* 2005;8(3):75.
9. Shea BJ, Reeves BC, Wells G, et al. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ.* 2017;358:j4008.
10. Organization. WH. "The global burden of disease: 2004 update" (PDF). 2008.
11. CRD. *Undertaking Systematic Reviews of Research on Effectiveness: CRD's Guidance for Carrying Out or Commissioning Reviews (CRD Report 4) 2nd edn. .* York: NHS Centre for Reviews and Dissemination, University of York.; 2001.
12. Higgins JP, Green S. *Cochrane handbook for systematic reviews of interventions.* Vol 5: Wiley Online Library; 2008.
13. Cochrane. The Cochrane Comparing Multiple Interventions Group

Accessed 6th Jan 2016.

14. ISSG. Filters to Identify Systematic Reviews. https://sites.google.com/a/york.ac.uk/issg-search-filters-resource/filters-to-identify-systematic-reviews. Accessed 3 August, 2016.
15. DiGuiseppe RAM, N. J. ; Trexler, L.D. . A Review of Rational-Emotive Psychotherapy Outcome Studies. *The Counseling Psychologist.* 1977;7:64-72.
16. Miller RC, Berman JS. The efficacy of cognitive behavior therapies: a quantitative review of the research evidence. *Psychological bulletin.* 1983;94(1):39-53.
17. Butler AC, Chapman JE, Forman EM, Beck AT. The empirical status of cognitive-behavioral therapy: a review of meta-analyses. *Clinical psychology review.* 2006;26(1):17-31.
18. Garner P, Hopewell S, Chandler J, et al. When and how to update systematic reviews: consensus and checklist. *BMJ.* 2016;354.
19. Covidence. Covidence: Faster systematic reviews. https://www.covidence.org/. Accessed June, 2016.
20. Hemming K, Pinkney T, Futaba K, Pennant M, Morton DG, Lilford RJ. A systematic review of systematic reviews and panoramic meta-analysis: staples versus sutures for surgical procedures. *Plos One.* 2013;8(10):e75132.
21. Moher D, Liberati A, Tetzlaff J, Altman DG, Grp P. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *Plos Med.* 2009;6(7).

22. Hempel S, Shekelle PG, Taylor SL, et al. Evidence map of mindfulness. *VA-ESP Project #05-226.* 2014.
23. Shea R, Wells, Thuku, Hamel. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ.* 2017.
24. Howick J, Glasziou P, Aronson JK. Evidence-based mechanistic reasoning. *J Roy Soc Med.* 2010;103(11):433-441.

Appendix A: Search Strategy for Medline

Database & platform: Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

Search strategy development date: 9 March 2018

1. (cognitive adj2 behavio?r adj3 (therap$ or theor$ or intervention$ or train$ or treatment$ or psychotherap$ or programme$ or program$ or method$ or approach$)).ti,ab,kw.

2. (cognitive adj2 behavio?ral adj3 (therap$ or theor$ or intervention$ or train$ or treatment$ or psychotherap$ or programme$ or program$ or method$ or approach$)).ti,ab,kw.

3. CBT.ti,ab,kw.

4. Cognitive Therapy/

5. or/1-4

6. Meta-Analysis as Topic/

7. meta analy$.tw.

8. metaanaly$.tw.

9. Meta-Analysis/

10. (systematic adj (review$1 or overview$1)).tw.

11. exp Review Literature as Topic/

12 or/6-11

13. cochrane.ab.

14. embase.ab.

15. (psychlit or psyclit).ab.

16. (psychinfo or psycinfo).ab.

17. (cinahl or cinhal).ab.

18. science citation index.ab.

19. bids.ab.

20. cancerlit.ab.

21. or/13-20

22. reference list$.ab.

23. bibliograph$.ab.

24. hand-search$.ab.

25. relevant journals.ab.

26. manual search$.ab.

27. or/22-26

28. selection criteria.ab.

29. data extraction.ab.

30. 28 or 29

31. Review/

32. 30 and 31

33. Comment/

34. Letter/

35. Editorial/

36. animal/

37. human/

38. 36 and 37

39. 36 not 38

40. or/33-35,39

41. 12 or 21 or 27 or 32

42. 41 not 40

43. 5 and 42

44. limit 43 to yr="1992-2018"

Appendix B: Sensitivity check papers

Part one

1. **Carlbring**, P. et al. *Internet-based vs. face-to-face cognitive behavior therapy for psychiatric and somatic disorders: an updated systematic review and meta-analysis.* Cognitive behaviour Therapy 2018 - Volume 47- 1
2. **Cuijpers**, P. et al *Internet-administered cognitive behavior therapy for health problems: a systematic review.* J Behav Med 2008 31:169–177 DOI 10.1007/s10865-007-9144-1
3. **De Arellano**. et al *Focused cognitive-behavioral therapy for children and adolescents: Assessing the evidence.* Psychiatric Services 2014, 65 (5) pp. 591-602,
4. **Farah**, W.H. et al, *Non-pharmacological treatment of depression: A systematic review and evidence map*. Evid Based Med. 2016; 21:214–221.
5. **Hesser**, H. et al. A systematic review and meta-analysis of randomized controlled trials of cognitive-behavioral therapy for tinnitus distress. Clin Psychol Rev. 2011 Jun;31(4):545-53.
6. **Hundt**, NE. et al. *A Systematic Review of Cognitive Behavioral Therapy for Depression in Veterans.* MILITARY MEDICINE 2014, 179, 9:942,
7. **James** AC. Et al.*Cognitive behavioural therapy for anxiety disorders in children and adolescents*. Cochrane Database of Systematic Reviews 2015, Issue 2.
8. **Jones** C, et al. *Cognitive behavioural therapy versus other psychosocial treatments for schizophrenia.* Cochrane Database of Systematic Reviews 2012, Issue 4. Art. No.: CD008712.
9. **Kavanagh**, J.,et *al School-based cognitive-behavioural interventions: A systematic review of effects and inequalities*, Health Sociology Review, 2009 18:1, 61-78, DOI: 10.5172/hesr.18.1.61
10. **O'Toole**, M. S., et al. A. *Cognitive behavioral therapies for informal caregivers of patients with cancer and cancer survivors: a systematic review and meta-analysis.* Psycho-Oncology, 2017 26: 428–437.
11. **Olthuis** JV, et al. *Therapist-supported Internet cognitive behavioural therapy for anxiety disorders in adults*. Cochrane Database of Systematic Reviews 2016, Issue 3. Art. No.: CD011565.
12. **Orgeta** V, et al. *Psychological treatments for depression and anxiety in dementia and mild cognitive impairment.* Cochrane Database of Systematic Reviews 2014, Issue 1. Art. No.: CD009125.
13. **Pallesen, S.,** et al. *Outcome of psychological treatments of pathological gambling: a review and meta-analysis.* Addiction, 2005 100: 1412–1422.
14. **Pineros-Leano, M., et al** *Latino immigrants, depressive symptoms, and cognitive behavioral therapy: A systematic review.* J Affect Disord. 2017 Jan 15;208:567-576.
15. **Richmond** H, et al. *The Effectiveness of Cognitive Behavioural Treatment for Non-Specific Low Back Pain: A Systematic Review and Meta-Analysis*. PLoS ONE 2015 10(8):
16. **Shinohara** K, et al *Behavioural therapies versus other psychological therapies for depression.* Cochrane Database of Systematic Reviews 2013, Issue 10.
17. **Smith** SMS, et al A review of the effectiveness of psychological interventions used for anxiety and depression in chronic obstructive pulmonary disease BMJ Open Respiratory Research 2014
18. **van Dessel N.** et al. Non-pharmacological interventions for somatoform disorders and medically unexplained physical symptoms (MUPS) in adults. Cochrane Database Syst Rev. 2014 Nov 1;(11):CD011142. doi: 10.1002/14651858.CD011142.pub2.

Part two:

1. Beynon S, Soares-Weiser K, Woolacott N, Duffy S, Geddes JR. Psychosocial interventions for the prevention of relapse in bipolar disorder: systematic review of controlled trials. The British Journal of Psychiatry. 2008; 192:5–11. [PubMed: 18174500] 2. *Del Vecchio T, O'Leary KD* Effectiveness of anger treatments for specific anger problems: a meta-analytic review. *Clin Psychol Rev. 2004 Mar; 24(1):15-34.*

3. Dutra L, Stathopoulou G, Basden SL, Leyro TM, Powers MB, Otto MW. A meta-analytic review of psychosocial interventions for substance use disorders. The American Journal of Psychiatry. 2008;165:179–187.
4. *Glombiewski JA, Sawyer AT, Gutermann J, Koenig K, Rief W, Hofmann SG* Psychological treatments for fibromyalgia: a meta-analysis. *Pain. 2010 Nov; 151(2):280-95.*
5. *Hofmann SG, Smits JA* Cognitive-behavioral therapy for adult anxiety disorders: a meta-analysis of randomized placebo-controlled trials. *J Clin Psychiatry. 2008 Apr; 69(4):621-32.*
6. *Kim JH* [A meta-analysis of effects of job stress management interventions (SMIs)]. *Taehan Kanho Hakhoe Chi. 2007 Jun; 37(4):529-39.*
7. *Leichsenring F, Leibing E* The effectiveness of psychodynamic therapy and cognitive behavior therapy in the treatment of personality disorders: a meta-analysis. *Am J Psychiatry. 2003 Jul; 160(7):1223-32.*
8. Okajima I, Komada Y, Inoue Y. A meta-analysis on the treatment effectiveness of cognitive behavioral therapy for primary insomnia. Sleep and Biological Rhythms. 2011;9:24–34
9. Pearson FS, Lipton DS, Cleland CM, Yee DS. The effects of behavioral/cognitive-behavioral programs on recidivism. Crime & Delinquency. 2002;48:476–496.
10. *Peng XD, Huang CQ, Chen LJ, Lu ZC.* Cognitive behavioural therapy and reminiscence techniques for the treatment of depression in the elderly: a systematic review. *J Int Med Res. 2009 Jul-Aug; 37(4):975-82.*
11. Powers MB, Vedel E, Emmelkamp PMG. Behavioral couples therapy(BCT) for alcohol and drug use disorders: a meta-analysis. Clinical Psychology Review. 2008;28:952–962
12. Rector NA, Beck AT. Cognitive behavioral therapy for schizophrenia: an empirical review. The Journal of Nervous and Mental Disease. 2001;189:278–287. [PubMed]
13. Santacruz I, Orgilés M, Rosa AI, Sánchez-Meca J, Méndez X, Olivares J. Generalized anxiety, separation anxiety and school phobia: The predominance of cognitive-behavioural therapy / Ansiedad generalizada, ansiedad por separación y fobia escolar: el predominio de la terapia cognitivo-conductual. Behavioral Psychology/Psicología Conductual. 2002;10(3):503–521
14. *Sockol LE, Epperson CN, Barber JP* A meta-analysis of treatments for perinatal depression. *Clin Psychol Rev. 2011 Jul; 31(5):839-49.*
15. *Soo S, Moayyedi P, Deeks J, Delaney B, Lewis M, Forman D* Psychological interventions for non-ulcer dyspepsia.*Cochrane Database Syst Rev. 2004; (1):CD002301.*
16. Taylor S, Asmundson GJG, Coons MJ. Current directions in the treatment of hypochondriasis. Journal of Cognitive Psychotherapy. 2005;19:285–304
17. Thompson-Brenner HJ. Implications for the treatment of bulimia nervosa: A meta-analysis of efficacy trials and a naturalistic study of treatment in the community. Michigan: University of Michigan; 2002
18. Van Straten A, Geraedts A, Verdonck-de Leeuw I, Andersson G, Cuijpers P. Psychological treatment of depressive symptoms in patients with medical disorders: a meta-analysis. Journal of Psychosomatic Research. 2010;69:23–32. [PubMed]

Appendix C: Inclusion checklists

Checklist for screening title and abstracts

- Is the study relevant (e.g. reject animal studies)?

YES/UNSURE – Continue screening

NO – Reject

- Is the study published after 1992?

YES/UNSURE – Continue screening

NO – Reject

- Is the study a systematic review of RCTs or a combination of RCTS and non RCTs?

YES/UNSURE – Continue screening

NO – Reject

- Is the focus of the review on CBT i.e. is CBT mentioned in title, abstract or keywords?

YES/UNSURE – Continue screening

NO – Reject

- Does the review have a psychological, physical/physiological or HRQL outcome?

YES/UNSURE – Include for full text screening

NO –

a. Does the review examine mediators of CBT?
YES - save for context in generalisation framework
NO - Reject.

Checklist for full text screening

- Is the review a systematic review?

  YES – Continue screening

  NO – Reject

- Does the review report RCT data separately?

  YES – Continue screening

  NO – Reject

- Does the review report CBT data separately?

  YES – Continue screening

  NO – Reject

- Does the review fulfil <u>at least</u> four of the five DARE criteria?

  1. Were inclusion/exclusion criteria reported? Yes No
  2. Was the search adequate? Yes No
  3. Were the included studies synthesized? Yes No
  4. Was the quality of the included studies assessed? Yes No
  5. Are sufficient details about the individual included studies presented? Yes No

  IF 4 YES'S - Continue screening

  NO – Reject

- Does the review have a psychological, physical/physiological or HRQL outcome?

  YES – Continue screening

  NO – Reject

Reasons for exclusion at full text screening

1 – Not a systematic review
2 – Not report RCT data separately
3 – Not report CBT specific data separately
4 – DARE criteria (4 out of 5) not fulfilled
5 - No HRQL, psychological or physical/physiological outcome