

# Cognitive behavioural interventions for mild depression in adolescents: title for a systematic review and network meta-analysis

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## TITLE OF THE REVIEW

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Cognitive behavioural interventions for mild depression in adolescents: title for a systematic review and network meta-analysis

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## BACKGROUND

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Depression is a public health problem, common in adolescents. It is estimated that around one in ten adolescents in the US experience at least one major depressive episode per year (Center for Behavioral Health Statistics and Quality, 2015). Similar figures can be consistently seen across Europe, although at the country level some have found the prevalence to be as high as one in five adolescents (Balazs et al., 2012).

A depression diagnosis is broadly characterised by low mood, decreased energy and concentration, sleep disturbances, loss of interest in activities, and feelings of worthlessness. When the diagnostic criteria for minor or major depressive disorder are not met, but an individual displays some of the depressive symptomology, the individual can be said to have mild depression, also referred to as moderate, subclinical or subthreshold depression (Pincus et al., 1999).

Mild depression is also common in adolescents. An analysis of data from the Saving and Empowering Young Lives in Europe study that included 12,395 adolescents aged 14-16 years from 11 European countries found that 29.2% were subthreshold depressed (Balázs et al., 2013). The authors of this paper also cite studies that have found figures ranging from 3% to 12% for 12-month prevalence to 26% for lifetime prevalence in children and adolescents.

A review of nine cross-sectional and 18 prospective longitudinal studies found that mild depression in adolescence is a significant risk indicator of later major depressive disorder and can have a negative impact on quality of life (Bertha and Balázs, 2013). An analysis from the Christchurch Health and Development Study birth cohort in New Zealand found that subthreshold depression in young people aged 17 to 18 was associated with later depression and suicidal tendencies up to age 25 (Fergusson et al., 2005). Overall, the data surrounding mild depression within adolescence indicate that it is clinically meaningful and that preventative and targeted interventions may reduce mental health and cognitive problems in later life (Sihvola et al., 2007).

Cognitive behavioural therapy (CBT) is widely used to prevent and treat depression among children, adolescents and adults and is recommended for treating mild depression in children and adolescents by the National Institute for Health and Care Excellence in the United Kingdom and the American Academy of Child and Adolescent Psychiatry (NICE, 2015; Birmaher et al., 2007). Thus, the focus of this review will be on interventions that are based on CBT.

Cognitive behavioural therapy or cognitive therapy, as it was called by Aaron Beck who developed it in the 1960s, is a psychotherapy based on the premise that cognitive distortions are responsible for maladaptive behaviour patterns and psychological problems, and that this cognition can be altered (Kendall & Panichelli-Mindel, 1995). According to this model, adolescents with depressive symptomology have negative perceptions about themselves, the world, and the future. This cognitive triad sustains the feelings of low self-esteem and hopelessness. Maladaptive cognitions often lead to misinterpretations about themselves (Powell et al., 2008). For example, depressed individuals will be selective in choosing the evidence for their performance, such that only those instances that support poor performance are remembered. Memories of negative interpretations become more accessible. Distortions arise from automatic thoughts, assumptions and beliefs. Maladaptive behaviours contribute in the development and persistence of depression. A reduction or lack in positive reward for healthy behaviours may lead to depressive symptomology, and depressed individuals often give up activities that they value. Thus, CBT aims to modify maladaptive cognition and behaviour through various strategies.

The principle technique in CBT is cognitive restructuring, i.e. identifying, evaluating and altering thoughts that lead to the presenting problem. The therapist and client work together to challenge the misconceptions and maladaptive assumptions and develop adaptive cognition. The client learns to monitor negative and automatic cognitions, evaluate the validity of these in the light of evidence, and replace these biased cognitions with more accurate interpretations. Some types of maladaptive cognitions include overgeneralisation (considering patterns faced in a few experiences to be a rule) and personalisation (attributing external events to the self). Alongside this, the client is taught to recognise and then modify the dysfunctional beliefs underlying the distorted cognitions.

CBT also involves behavioural techniques such as behaviour monitoring, behavioural activation and change (facing fears rather than avoidance), scheduling pleasurable activities, breaking down activities into manageable tasks, role-playing (to practice the required skills and prepare for stressful events; for example practicing interpersonal skills for a difficult conversation with an authority figure), problem-solving skills (to cope with difficult situations and develop more self-confidence), and relaxing the mind and body. A lack of positive reinforcement is understood to engender inaccurate thoughts and beliefs (for example, problems in relationships can lead to negative self-assessment) and thus, the therapist and the client work to generate appropriate positive reinforcement (for example, performing desired activities that challenge the dysfunctional cognitive assessments). Other important aspects of CBT include a mood or thought diary where clients record thoughts and upsetting events, and homework that helps apply what is learnt in day-to-day life.

The dose (number, duration and frequency of sessions) of CBT varies and the dose-response relationship is not well understood (Girlanda et al., 2016). CBT can be delivered by a therapist or through self-help. Therapist support may be delivered face-to-face or remotely, which can be real-time or delayed. Potential reasons for virtual appointments are to improve

accessibility to therapy and reduce costs. The content and level of support is often similar between face-to-face and remote therapy. Self-help is a mode of delivery that is largely independent of professional contact, although it can be guided by a professional rather than completely replacing one. Self-help is delivered remotely. Self-help CBT can be standardised (i.e. the material is not tailored to individuals and is the same the package for all) or personalised (i.e. the material is tailored to individual needs); it may or may not be interactive.

CBT is traditionally delivered by a professional therapist in a face-to-face session. Alternative methods of delivery are becoming popular for various reasons. First, one-to-one real-time delivery is resource-intensive. This is problematic if there is a lack of therapists, which is often the case in the UK (Kaltenhaler et al., 2008). Being resource-intensive, it increases the costs and waiting times, and reduces the availability of treatment. It has been suggested that less than 25% of the general population with depression in the developed world have access to treatments, including adolescents (Van Voorhees et al., 2011; Eisen et al., 2013; Gilbody et al., 2003; Stein et al., 2006). Although group sessions can partially address some of these concerns by providing therapy to multiple patients at once, self-help CBT can tackle these more comprehensively. Unlike traditional therapy, where a clinician's time is "consumed", interventions delivered in this way are "recyclable" and can be reused time after time, making the availability almost infinite.

Second, self-help is interesting in the context of some adolescents' reluctance to discuss openly issues pertaining to their mental health, and the stigma that is perceived as surrounding mental health care (Ebert et al., 2015). The anonymity provided by self-help methods of delivery may make users more likely to engage with them than with face-to-face therapist support.

Third, self-help and (delayed) remote therapist-led interventions (such as those delivered via emails or text messages) provide flexibility as they can be accessed anywhere and at any time. More importantly, the self-help format provides a flexible structure for the user: users may have the option to set their own pace and schedule for the intervention, while traditional approaches set rigid and strict timescales.

Despite these potential advantages, there are some concerns with self-help CBT, namely its limited ability to provide bespoke support and the lack of a therapeutic relationship, which is considered by many to be integral in achieving outcomes (Lambert et al., 2009). To a certain extent, personalised and interactive self-help that is possible through the use of technology addresses the first concern, i.e. the provision of bespoke support. For example, the Think, Feel, Do computer-based programme is an interactive game for young people, where participants can choose the character who would enact them, and the consequences of scenarios change based on the participant's responses to what they might think or do in a situation (McCusker, 2008). Guided self-help can potentially address the second concern, namely the lack of a therapeutic relationship. Some studies find that high quality therapeutic

relationships can be established through therapist-guided self-help CBT (Andersson et al., 2012; Linder et al., 2014), and that these could even be comparable to face-to-face sessions (Preschl et al., 2011). A related concern with self-help CBT is that user engagement (intervention completion or exposure to the intervention) is often lower (Waller & Gilbody, 2009). However, a review of the acceptability of cognitive-behavioural therapies for depression in adults found that although the number of participants who completed the intervention was higher for face-to-face therapy compared to internet CBT, the average amount of exposure to the intervention was similar (van Ballegooijen et al., 2014).

Although these concerns are important, the key issue is that existing research (discussed below) does not provide clear conclusions regarding the relative effectiveness of the different types of self-help CBT and therapist-led CBT. In the absence of this, it is difficult to weigh the benefits and concerns regarding self-help options.

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## **OBJECTIVES**

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Given the potential of self-help CBT to increase the availability of treatment, and the lack of understanding about its comparative effectiveness (i.e. relative to therapist-led CBT), the current review aims to examine differences in the effectiveness of CBT based on delivery features. The review will provide effect estimates and ranking probabilities on the effectiveness of interventions to reduce depressive symptoms in adolescents based on intervention delivery. For example, it will explore whether A is more effective than B, B is more effective than C, and so on, where A, B and C are CBT interventions using different modes of delivery (e.g. therapist-led, self-help, guided self-help). It will also provide the comparative effectiveness for each pair of interventions (i.e. A vs. B), based on delivery.

The findings of this review will have implications for policy and practice and the future funding of mental health service provision by providing an understanding of how different CBT delivery modes compare to each other on a subpopulation of mildly depressed adolescents. If any less resource-intensive modes of delivery are found likely to rank higher than those requiring more therapist time, it could not only increase the availability of treatment but also have important cost-benefit implications (Kaltenhaler et al., 2008).

### **Primary Question**

1. In terms of reducing depressive symptoms in adolescents with mild depression, how do cognitive behavioural interventions differentiated by delivery modes compare to each other and to control groups?

### **Secondary Questions**

2. With regards to intervention completion/attrition (used as a proxy for intervention acceptability), how do cognitive behavioural interventions (for depressive symptoms

in adolescents with mild depression) differentiated by delivery modes compare to each other and to control groups?

3. Is the effect of cognitive behavioural interventions on reducing depressive symptoms in adolescents with mild depression moderated by dosage (total duration of the intervention)?

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## EXISTING REVIEWS

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The most relevant research for the study objectives is a recently published systematic review that looked at the effectiveness of computerised therapies for anxiety and depression in children and young people (Pennant et al., 2015). The review included three programmes for depression and two programmes that aimed at both anxiety and depression, some of which were interactive games, some standardised educational programmes and some with therapist input included. It found that computerised CBT was more effective than non-therapeutic controls, but the evidence comparing computerised and face-to-face CBT was limited. There were only two studies, both of which targeted anxiety or depression rather than depression alone; the studies found that face-to-face therapy was more effective.

A limitation of the review, at least as far as the current study is concerned, is that it looked at computerised therapies as a whole, rather than separating them out according to whether they involved personalisation and included therapist support. Similarly, another review that found computerised CBT interventions to be effective in reducing depressive symptoms in children and young people up to age 25 did not differentiate between different variations of CBT (Ebert et al., 2015). This omission is potentially important because there is some evidence based on an analysis of computerised psychotherapies with adults that the effect on reduction of depressive symptoms is moderated by the level of therapist support, with larger effects associated with therapist involvement (Andersson & Cuijpers, 2009). This analysis only included computerised self-help (excluding traditional bibliotherapy) and did not compare the different computerised psychotherapies to traditional face-to-face therapies.

Finally, existing reviews are limited by the lack of primary research comparing the effectiveness of multiple modes of delivering CBT simultaneously. While there are studies that compare the effectiveness of a particular mode of delivery of CBT to no intervention (e.g. van der Zanden et al., 2012) or another non-CBT control condition (e.g. Reynolds & Coats, 1986), few studies conduct a head-to-head evaluation of two different modes of delivering CBT.

In order to address this gap, this review will conduct a network meta-analysis, a method that includes indirect evidence of the relative effectiveness of different interventions and thus allows comparison of pairs of interventions where there are few or no studies that have tested the two interventions in a head-to-head trial. This method will also allow for examination of the ranking probabilities<sup>1</sup> of competing modes of delivering CBT based on their relative effectiveness for reducing mild depression among adolescents (Salanti et al., 2011).

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<sup>1</sup> Ranking probabilities is a method in which each treatment is ranked by calculating the probability of it being the most effective treatment.

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## INTERVENTION

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The review will include cognitive behavioural interventions that aim to reduce symptoms of depression in adolescence, irrespective of delivery mode. For the purposes of this review, an intervention will be considered a cognitive behavioural intervention if it includes (1) evaluation of cognition to identify dysfunctional cognition, and (2) cognitive restructuring to adopt helpful cognition, and (3) a component focusing on behaviour: behavioural activation, problem solving, social skills training, or relaxation techniques. If the description of the intervention in source documents is not adequate to make an assessment on inclusion based on the above criteria, the author(s) will be contacted. If we do not receive further details from the author(s), we will include studies that identify the intervention as CBT and exclude studies that do not identify the intervention as CBT.

In line with the above conceptualisation of CBT, interventions such as acceptance and commitment therapy (ACT), mindfulness-based cognitive therapy (MBCT) and dialectical behaviour therapy (DBT) that are rooted in principles different from those of CBT and focus on helping people to accept thoughts in a non-judgemental manner will be excluded (e.g. Hayes et al., 1999; Linehan et al., 2006; Segal et al., 2012).

Interventions will be placed according to their mode of delivery into the following seven categories:

1. **Therapist-delivered CBT in one-to-one sessions:** This includes CBT delivered by a therapist to individual clients either in face-to-face sessions, or remotely but in real-time (for example, audio or video call, live messaging).
2. **Therapist-delivered CBT in group sessions:** This is similar to the above, but sessions are conducted for a group of clients rather than an individual client. For example, Master Your Mood is a group CBT programme primarily delivered through online chat (van der Zanden et al., 2012).
3. **Therapist-led CBT delivered remotely and delayed:** This includes CBT that is delivered by a therapist remotely and is not in real-time – for example, emails and delayed messaging. The delivery can be to individual clients or groups of clients. If an intervention combines real-time and delayed support, it will be categorised based on the primary means of therapist contact.
4. **Standardised self-help:** This involves educating the client in principles of CBT through reading material and helping them apply it through some quizzes and activities. Traditionally, this was referred to as bibliotherapy and included workbooks. For example, *Mind Over Mood* (Greenberger & Padesky, 1995) is a well-known CBT self-help manual. Now CBT can be provided through various technological platforms (such as smartphone applications or browser-based programmes), and include audio files and videos in addition to text. When delivered electronically, self-help may include additional features such as reminders as well as some basic guidance on how to use the materials.

5. Provision of therapist support in addition to standardised self-help: This involves standardised material to introduce and guide the client through CBT, alongside support from a therapist. For example, clients might gain an understanding of the approach to thoughts via the workbook and could be given homework and have regular feedback calls with a therapist. CATCH-IT is an online programme that includes professional support through motivational interviewing at the beginning and end of the 11 module programme (van Voorhees et al., 2009). The initial session allows the professional to support the participant in goal setting, while the final session helps motivate participants to change behaviour based on the CBT training.
6. Customised self-help: This can include initial assessment, quizzes, thought diaries, activity planning, goal setting and homework tasks that interact with the client and respond to their inputs, in addition to educative material. This is often interactive - truly interactive material can only be delivered digitally. It is often delivered through a virtual therapist (a programmed expert who interacts with the participant, generally in the avatar of a person). Such programmes often include audio-visual sessions and could take the format of a game. For example, Beating the Blues is an interactive computer programme consisting of eight interactive sessions and homework (Kaltenthaler et al., 2008). However, in one study, a nurse was present to provide support with any technical difficulties in running the programme (Proudfoot et al., 2004). Such help is not considered as therapeutic support in this review. MoodGYM is another web-based interactive programme that does not involve therapist support (<https://moodgym.anu.edu.au>).
7. Customised self-help with additional support: These are programmes like those described above (in category 6), but are delivered along with a therapist who provides support either in face-to-face meetings or remotely. For example, the programme Think, Feel, Do is an interactive resource that is facilitated by a professional who clarifies concepts and elaborates on programme content (Attwood et al., 2011; Stallard et al., 2011; McCusker 2008). The programme is in the form of an interactive game, with videos changing based on user response. Pesky gNATs is another example (<http://peskygnats.com/>). It is a computer game which is played in the presence of a professional to maintain a therapeutic relationship.

In order to be included in the current review, studies must do one of the following:

1. Compare two cognitive behavioural interventions delivered through different delivery modes. Studies comparing two versions of cognitive behavioural interventions that have the same delivery mode will not be included in the network meta-analyses. For example, a study of the CATCH-IT programme compares the effectiveness of CATCH-IT supplemented with motivational interviewing to CATCH-IT supplemented with a brief advice session (van Voorhees et al., 2009); both groups fall into the same delivery category of assisted standardised self-help, and thus will be excluded from the network meta-analysis examining the effectiveness of the different delivery modes. If such a study also has another relevant intervention or control

group, the two different groups with a common delivery mode will be considered as one intervention for the analysis. The way the common effect size will be determined will be explained in the protocol.

2. Compare a cognitive behavioural intervention with a control group. Eligible control groups include no intervention, psychological and attention placebos or other psychotherapies. Control groups receiving any pharmacological treatment (e.g. antidepressants), complementary and alternative medicine (e.g. light therapy, acupuncture), or physical interventions (e.g. yoga, exercise) will not be considered because they are beyond the scope of this review. Waitlist controls will be classified as no intervention or services-as-usual based on what the study offered. Services-as-usual will be classified as no intervention, another type of cognitive behavioural intervention or a non-CBT based psychotherapy intervention. Psychological placebos include psychoeducation that is not expected to have any impact on the outcome of interest. Where services-as-usual or placebo are not adequately described in source documents, the author(s) will be contacted. If sufficient detail is not obtained, the study in question will be excluded. Psychological placebo and service-as-usual groups will be broken down further based on delivery mode. For example, self-help psychological placebos will be differentiated from in-person psychological placebos. All non-CBT therapies will be considered together, separated only by delivery mode and format, rather than specific therapeutic approach.

Studies where CBT is implemented in combination with another intervention will be excluded unless the comparison group also received the additional intervention.

Comparisons will be classified as (1) no intervention, (2) therapist-led placebo, (3) self-help placebo, (4) self-help placebo with customisation, (5) therapist delivered non-CBT intervention, (6) non-CBT based self-help intervention, (7) non-CBT based self-help intervention with customisation.

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## **POPULATION**

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The population of interest is adolescents with mild depression.

### **Age**

All studies conducted with adolescents aged 12-18 years will be included. Studies conducted with secondary or high school students<sup>2</sup> will also be included (where the age range may differ

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<sup>2</sup> Depending on the country, the age of secondary or high school students varies but typically spans adolescence. For example, in the United Kingdom, secondary school students may be 11 to 16 or 18 years old, whereas in the United States high school could start at age 13, but often starts at age 14 or 15 and is completed at age 17 or 18.

slightly). Where studies include children or adult populations along with adolescents, they will be included where the mean age of the sample falls between 12 and 18 years.

## **Diagnosis**

The severity of depression is known to moderate the effectiveness of the intervention (Weisz et al., 2013; Jayson et al., 1998), and this review aims to examine the scope of cognitive behavioural interventions specifically to address mild depression.

Thus, the review will focus on adolescents with mild depression, i.e. elevated but subclinical levels of symptoms according to a diagnostic tool, or mild depression according to a validated measure. Examples of diagnostic tools include the Diagnostic and Statistical Manual of Mental Disorders 5 (DSM-5; APA, 2013) and the International Classification of Diseases 10 (ICD-10; WHO, 2010). Examples of validated measures include the Beck Depression Inventory Second Edition (BDI-II; Beck et al., 1996) and the Centre for Epidemiologic Studies Depression Scale Revised (CESD-R; Eaton et al., 2004). The identification of mild depression is challenging, with no specific cut-off scores and the use of different terms (e.g. mild, moderate, subthreshold) by different measures (Bertha & Balázs, 2013). Thus, the review team will establish the cut-off scores for each measure *a priori* based on previous research.

Other mental health constructs such as 'attributional style' or 'mood' are not considered as elevated depressive symptoms and thus will be excluded.

Studies with adolescents with any comorbid disorders (e.g. depression and anxiety, depression and schizophrenia) will only be included if a majority (>50%) of the sample does not have comorbid disorders. Studies that include adolescents with major depressive disorder will be excluded, as will studies of adolescents who are deemed to be at risk of developing any form of depressive disorder but who do not display elevated symptoms. The exception is when the mean depression score at baseline for the intervention and comparison groups falls in the elevated but subclinical level of depressive symptoms for that particular scale. Studies will also be excluded in cases where a majority of participants had a previous diagnosis of depression.

Studies will also be excluded if their inclusion criteria include adolescents with cognitive impairments (e.g. learning difficulties and autism), or adolescents with chronic or acute physical health conditions, or if the reports state that adolescents with these types of impairments or conditions were part of the study sample. The purpose of this last criterion is to limit the variation in population within and across studies in the network, as it is an important effect modifier that has implications for the reliability of the network meta-analysis.

## **Setting**

Studies will not be excluded based on their country of origin, but only studies published in English will be reviewed. Studies that include participants of a specific characteristic (e.g. ethnicity or children or divorce) will not be excluded unless the intervention has been designed specifically for the population or has made adaptations to the content of the intervention and a threat to the transitivity assumption<sup>3</sup> is therefore present.

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## **OUTCOMES**

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The primary outcome for the review will be change in depressive symptoms from baseline to post-intervention. To be included in the analysis, assessment of depressive symptoms must be self-report or interview-based according to a diagnostic tool or validated measure. The list of specific measurement scales that will be considered, along with the cut-off scores for inclusion in the review, will be determined *a priori*.

Analysis will be based on post-intervention assessment. Follow-up outcomes will be narratively synthesised, but not included in the analysis.

Where a study reports outcome data in such a way that inclusion in analysis is not possible (for example, means or standard deviations are not provided), we will contact the author(s) for the required data. If those data cannot be provided, we will describe the results in the narrative summary.

Studies reporting other measures of depression or composite measures of mental health (such as internalising behaviour) will be narratively synthesised. Similarly, outcomes other than depression reported in the studies will be recorded and narratively synthesised, identifying any potential unintended and adverse intervention effects. Data on cost-effectiveness, if reported in the included studies, will be also be summarised in the narrative.

The secondary outcome is acceptability of the intervention. This will be defined as completing the intervention, i.e. participants engaging with the intervention. This will be operationalised as intervention discontinuation or attrition or the number of participants who dropped out of the study at posttest.

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<sup>3</sup> According to the transitivity assumption, the effect size estimated through a network meta-analysis would be the same as the effect size obtained if all the interventions and comparison nodes were evaluated in a multi-arm RCT. It means that participants can be randomised to receive any of the intervention or comparison conditions.

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## STUDY DESIGNS

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This review will look exclusively at randomised controlled trials (RCTs) with pre and post data. Cluster RCTs (i.e. where groups of participants (e.g. a classroom), rather than individuals, are the unit of random allocation), quasi-randomised trials (i.e. use of quasi-random methods of allocation such as alternation, date of birth, case record number), and controlled clinical trials (i.e. where randomisation cannot be ruled out as a method of allocation) will be eligible. Cross-over studies (i.e. where study groups receive two or more interventions in different sequences) will be included only if they are RCTs and if they provide data at the end of the first stage. Multi-arm trials will be considered as a series of two-group comparisons.

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## REVIEW AUTHORS

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**Lead review author:** The lead author is the person who develops and co-ordinates the review team, discusses and assigns roles for individual members of the review team, liaises with the editorial base and takes responsibility for the on-going updates of the review.

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**ROLES AND RESPONSIBILITIES**

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- **Content:** Luke Timmons will provide the content of the review that is pertinent to adolescent depression and interventions delivered via technology. Luke has extensive knowledge of the literature surrounding adolescent depression, and adolescent mental health is a focus of his doctoral research. Shreya Sonthalia will provide the methodological content. Gretchen Bjornstad, Benjamin Rouse and Nick Axford will review and edit all content.
- **Systematic review methods:** Shreya Sonthalia and Gretchen Bjornstad will design the methodology for the review, with suggestions and input from Nick Axford. Shreya has worked on various reviews of evidence-based programmes, including a Cochrane-style systematic review. Gretchen has previously co-authored two Cochrane systematic reviews involving meta-analysis of interventions for behaviour problems in children and has taken a short course in Network Meta-Analysis at the University of Oxford. Nick has a wealth of

experience in comprehensive rapid reviews and leads the Unit's rigorous review process for the Blueprints for Healthy Youth Development database (assessing the quality of experimental evaluation).

- **Statistical analysis:** Benjamin Rouse will perform the statistical analyses. Benjamin has experience in conducting network meta-analysis and is familiar with multiple programs for network meta-analysis, including Stata and WinBUGS.
- **Information retrieval:** Luke Timmons and Shreya Sonthalia, with input from Gretchen Bjornstad if required. Luke led on the search and screening process in a recent comprehensive rapid evidence review focusing on safeguarding for Public Health England and has previously conducted various critical reviews of literature focused on an adolescent population. Shreya has extensive experience in searching databases and conducting reviews through her work on the Blueprints for Healthy Youth Development database and a related European Commission project, and other rapid evidence reviews. Both have experience in coding and critically appraising studies.

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## **FUNDING**

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This Campbell Collaboration Title Registration Form is submitted under the Call for Applications: Better Evidence for Children and Youth. No other funding has been sought.

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## **POTENTIAL CONFLICTS OF INTEREST**

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None of the authors have been involved in the development of any relevant interventions or primary research, and nor have they published a prior review on the topic.

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## **PRELIMINARY TIMEFRAME**

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Note, if the protocol or review are not submitted within 6 months and 18 months of title registration, respectively, the review area is opened up for other authors.

- Date you plan to submit a draft protocol: April 2017
- Date you plan to submit a draft review: March 2018

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## AUTHOR DECLARATION

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### **Authors' responsibilities**

By completing this form, you accept responsibility for preparing, maintaining, and updating the review in accordance with Campbell Collaboration policy. The Coordinating Group will provide as much support as possible to assist with the preparation of the review.

A draft protocol must be submitted to the Coordinating Group within one year of title acceptance. If drafts are not submitted before the agreed deadlines, or if we are unable to contact you for an extended period, the Coordinating Group has the right to de-register the title or transfer the title to alternative authors. The Coordinating Group also has the right to de-register or transfer the title if it does not meet the standards of the Coordinating Group and/or the Campbell Collaboration.

You accept responsibility for maintaining the review in light of new evidence, comments and criticisms, and other developments, and updating the review every five years, when substantial new evidence becomes available, or, if requested, transferring responsibility for maintaining the review to others as agreed with the Coordinating Group.

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The support of the Coordinating Group in preparing your review is conditional upon your agreement to publish the protocol, finished review, and subsequent updates in the Campbell Library. The Campbell Collaboration places no restrictions on publication of the findings of a Campbell systematic review in a more abbreviated form as a journal article either before or after the publication of the monograph version in *Campbell Systematic Reviews*. Some journals, however, have restrictions that preclude publication of findings that have been, or will be, reported elsewhere and authors considering publication in such a journal should be aware of possible conflict with publication of the monograph version in *Campbell Systematic Reviews*. Publication in a journal after publication or in press status in *Campbell Systematic Reviews* should acknowledge the Campbell version and include a citation to it. Note that systematic reviews published in *Campbell Systematic Reviews* and co-registered with the Cochrane Collaboration may have additional requirements or restrictions for co-publication. Review authors accept responsibility for meeting any co-publication requirements.

**I understand the commitment required to undertake a Campbell review, and agree to publish in the Campbell Library. Signed on behalf of the authors:**

**Form completed by:**

**Date: 10 March 2017**

*Gretchen Bjornstad*

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