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Effectiveness of psychological treatments for depression in childhood and adolescence: A review of reviews

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Abstract

Depression in childhood and adolescence is a public health problem due to its high prevalence and the impact it has in the individual development. There is clear evidence of the efficacy of Interpersonal Therapy (IPT) and Cognitive-Behavioural Therapy (CBT) in the treatment of depression in children and adolescents; however, recent reviews and meta-analyses provide new perspectives for treatment. The purpose of this work is to synthesize the bibliography available through a systematic review of systematic reviews and meta-analysis that summarizes in a comprehensive way the evidence of the last two decades on the effectiveness of psychological interventions for infant-juvenile depression. A systematic review of systematic reviews and meta-analyses was performed. A search was conducted in the Web of Science and Scopus databases. Eight records met the inclusion criteria, 2 were analysed in their entirety and from the remaining 6 the information needed for independent analysis was extracted. Seven different psychotherapies were studied: CBT and IPT were the most studied (*n*=7; 87.5%), followed by family therapy (*n*=5; 62.5%), psychodynamic therapy (*n*=3; 37.5%), behavioural therapy (*n*=3; 37.5%), computerised CBT (*n*=2; 25%), problem-solving therapy (*n*=1; 12.5%) and supportive therapy (*n*=1; 12.5%). IPT and CBT were shown to be effective in the treatment of adolescent depression. Half of the reviews (*n*=4; 50%) had a low methodological quality and the other half (*n*=4; 50%) were classified as critically low. In general, psychological interventions for child and adolescent depression produce significant, but modest effects. Specifically, IPT and CBT can be considered the main treatment alternatives for adolescent depression. There is insufficient data of specific psychological treatment for children diagnosed with a depressive disorder. It is suggested that research should be increased to improve the methodological quality and increase the number of studies aimed at the children population.

Keywords: umbrella review; psychological treatments; psychotherapy; depression; childhood; adolescence.

Resumen

Eficacia de los tratamientos psicológicos para depresión en la infancia y la adolescencia: Una revisión de revisiones. La depresión infanto-juvenil es un problema de salud pública por su elevada prevalencia y el impacto que tiene en el desarrollo del individuo. Aunque existe una sólida evidencia sobre la eficacia de la psicoterapia interpersonal y la terapia cognitivo-conductual (TCC) en el tratamiento de la depresión en niños y adolescentes, recientes revisiones y meta-análisis aportan nuevas perspectivas de tratamiento. La finalidad de este trabajo es sintetizar la bibliografía disponible mediante una revisión sistemática de revisiones sistemáticas y meta-análisis que resuma de manera integral la evidencia de las últimas dos décadas sobre la eficacia de las intervenciones psicológicas para la depresión infanto-juvenil. Se realizó una revisión sistemática de revisiones sistemáticas y meta-análisis. Se llevó a cabo una búsqueda en las bases de datos Web of Science y Scopus. Ocho registros cumplieron los criterios de inclusión, 2 se analizaron en su totalidad y de los 6 restantes se extrajo la información necesaria para ser analizada independientemente. Se estudiaron siete psicoterapias distintas: la TCC y la terapia interpersonal fueron las más estudiadas (n=7; 87,5%), seguidas por la terapia familiar (n=5; 62,5%), la terapia psicodinámica (n=3; 37,5%), la terapia conductual (n=3; 37,5%), la TCC informatizada (n=2; 25%), la terapia de resolución de problemas (n=1; 12,5%) y la terapia de apoyo (n=1; 12,5%). La terapia interpersonal y la TCC demostraron ser efectivas en el tratamiento de la depresión adolescente. La mitad de las revisiones (n=4; 50%) presentaron una calidad metodológica baja y la otra mitad (n=4; 50%) se clasificó como críticamente baja. Las intervenciones psicológicas para la depresión infanto-juvenil, en general, producen efectos significativos, pero modestos. De forma específica, la terapia interpersonal y la TCC pueden considerarse las principales alternativas de tratamiento para la depresión adolescente. No se dispone de datos suficientes sobre el tratamiento psicológico específico para niños con un

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diagnóstico de un trastorno depresivo. Se sugiere un aumento de la investigación que mejore la calidad metodológica y aumenten los estudios dirigidos a la población infantil.

Palabras clave: revisión de revisión; meta-revisión; tratamientos psicológicos; psicoterapia; depresión; infancia; adolescencia.

Depression is a major public health problem, currently one of the leading causes of illness and disability in adolescents (World Health Organization [WHO], 2021a). The presence of depression during adolescence acts as a risk factor for developing another depressive episode, as happens in 60-70% of cases (Birmaher et al., 1996; Kovacs et al., 1984). However, in most cases, childhood and adolescent depression is not detected or treated due to its atypical manifestation and high comorbidity (Flament et al., 2011; WHO, 2021b).

Depression during childhood and adolescence has a great impact on the social and personal development, being associated with a decrease in academic performance, a deterioration in social functioning, problems in the relationship with family members and peer groups, and with an increased risk of self-harm and suicidal ideas and behaviours (Birmaher et al., 1996; Weissman, 1999) at a time when suicide represents the third cause of death between 15 and 19 years in Spain (Instituto Nacional de Estadística [INE], 2020) and the fourth in the world (WHO, 2021b).

There is a high comorbidity in infant-juvenile depression, especially with anxiety disorders, behavioural and opposition disorders and with attention deficit hyperactivity disorder (ADHD) (Angold & Costello, 1993). Although similar criteria are used for the diagnosis of depression among youth and adults, children and adolescents present more somatic symptoms, such as headache or stomach pain, and irritability and boredom stand out as the predominant mood symptoms, unlike adults, who report higher levels of sadness (Flament et al., 2011), which can make identification difficult.

In a meta-analytical review, Erskine et al. (2017) found an overall mean prevalence of depression of 6,2% in children and adolescents between 5 and 17 years. This is corroborated by data from the Costello et al. (2006) study, which found depression prevalence rates of 2.8% for children under 13 and 5.6% for adolescents between 13 and 18.

Given the high prevalence and impact of depressive disorders, multiple clinical practice guidelines have been published to provide reliable recommendations for addressing childhood depression, such us the guideline of the National Institute for Health and Care Excellence (NICE, 2019), which proposes psychotherapy as a first-line treatment before considering pharmacological interventions in children and adolescents between 5 and 18 years old who present mild or moderate-severe depression.

There are several systematic reviews and meta-analyses that evaluate the efficacy of treatments for infant-juvenile depression, finding strong evidence for interpersonal psychotherapy (IPT) (adapted for adolescents) and cognitive-behavioural therapy (CBT) (Zhou et al., 2015), which can be considered *well-established treatments* for depression in adolescents (11-18) following the evidence criteria of the American Psychological Association (APA), while CBT may be considered a *possibly efficacious treatment* for depression in children (5-11) (Weersing et al., 2017).

Recent studies bring new perspectives to the treatment of depression in children, such as the meta-analysis of Zhou et al. (2020), which includes studies from 1986 to 2018, or the review of Méndez et al. (2021), which considers different treatment modalities, such as computerised CBT or family therapy, so it is essential to synthesize information on the evidence available for recent interventions, as it would allow greater and easier access to updates and help identify areas requiring further study and deepening.

In the last decade there has been a substantial increase in the number of *umbrella reviews* published, understood as systematic reviews of systematic reviews and meta-analyses, and which represent one of the highest levels of evidence synthesis currently available (Fusar-Poli & Radua, 2018). Thus, *umbrella reviews* have been published aimed to addressing various issues about the treatment of depression in childhood and adolescence, such as those of Trujillo-Franco and Martínez-Martínez (2021) and Wegner et al. (2020), evaluating the effects of physical exercise on infant-juvenile depression, that of Crowe and McKay (2017), which focuses on the effectiveness of CBT or, more generally, those of Correll et al. (2021) and Cortese et al. (2018) which analyse the effectiveness of pharmacological and psychosocial interventions in children and adolescents with different psychopathologies, including depression. However, there are methodological variations and limitations between these reviews that make it difficult to generalize the results, since, for example, some of them admitted the presence of symptoms of depression with any degree of severity, diagnosis is not necessary (Trujillo-Franco & Martínez-Martínez, 2021), or they included systematic reviews or meta-analyses accepted studies with any type of design (such as quasi-experimental studies or non-randomized controlled trials) (Trujillo-Franco & Martínez-Martínez, 2021; Wegner et al., 2020). Although, while it is true that the rest of the reviews follow a similar methodology (they only include systematic reviews and meta-analyses of randomized controlled trials (RCT) that address the treatment of children and adolescents with a diagnosis of depression), only focus on a specific type of treatment (Crowe & McKay, 2017) or do not exclusively address psychotherapy, including a large number of studies that focus just on the effect of antidepressants on pediatric depression (Correll et al., 2021; Cortese et al., 2018).

Taking into account all these issues, and since no review of reviews of the efficacy of psychotherapy for the treatment of depression in children and adolescents has been found following a review of the existing literature, the present *umbrella review* aims to: a) comprehensively summarize the evidence of the last two decades on the effectiveness of psychosocial interventions for infant-juvenile depression; b) facilitate access to existing evidence; c) provide a framework for guidance to mental health professionals and researchers; and d) help identify gaps and limitations in the present area of study in order to guide future research. With these objectives, this work aims to provide data on the scientific evidence about the effectiveness of psychological interventions for the treatment of depression in children and adolescents, and explore the advances in research on the efficacy of treatments for depressed children and adolescents in the last two decades.

Method

This systematic review of systematic reviews and meta-analyses was performed following *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) (Page et al., 2020). This *umbrella* was also registered at PROSPERO (CRD42022360071) on September 13, 2022.

Eligibility criteria

To determine which revisions and meta-analyses were appropriate for the present *umbrella*, these had to meet criteria that were established

following the 5 categories proposed by the PICOS method (Methley et al., 2014). The following inclusion criteria were therefore defined:

a)Population

Age: Children and adolescents up to 19 years, following the age classification proposed by the WHO (2002). In addition, because there is no consensus regarding the definition of the stages of the life cycle, it was agreed that, in case of finding reviews where the author identified adolescence in an age range >19, these would be included as long as the mean was <19, following the criteria already established by other studies and reviews, such as Weisz et al. (2006) and Zhou et al. (2020).

Diagnosis: Participants should present a primary diagnosis of a depressive disorder, including major depressive disorder, dysthymia and other specified types, diagnosed according to a clinical interview, based on the criteria proposed by the Diagnostic and Statistical Manual of Mental Disorders (DSM), the International Classification of Diseases (ICD) or others, in any of its versions, or according to any of the validated scales and standardized measures.

It was also established that studies on psychotic, chronic and/or refractory depression could be included because, despite the special conditions of these depressive disorders, patients in these studies meet the criteria for depression (Jobst et al., 2016).

b)Intervention

The included studies should evaluate the effectiveness of psychological interventions in the treatment of childhood and adolescent depression, defined as any type of psychotherapy, in any of its modalities (individual, group, online).

c)Comparator

For a wider scope of this *umbrella*, it was decided to include reviews comparing the effects between different types of psychotherapy and/or a control group, that is, no restrictions were established with respect to the comparator, allowing any type of comparison, whether active or passive control: waiting list, no treatment, treatment as usual, placebo, other intervention or any other method of comparison.

d)Outcome

The outcome variable that was considered was the efficacy of psychotherapy in post-treatment, understood as the impact of the intervention on infant-juvenile depression, more specifically as the reduction of depressive symptoms, measure by any method providing qualitative or quantitative information, such as structured clinical interviews, validated measurements, standardized screening questionnaires such as *Children's Depression Inventory* (CDI; Kovacs, 1985), self-reported improvement and/or effect size in case meta-analyses report this information.

e)Study Design

Systematic reviews or meta-analyses that include only randomized controlled trials (RCT) (including cluster RCTs and crossover RCTs), in order to minimize the risk of bias, as RCTs, due to their characteristics, make it possible to determine more accurately the existence of cause-effect between the intervention and the results (Sibbald & Roland, 1998).

In addition, no geographical limitations were established, but the revisions should be available in English or Spanish and should have been published from 2001 to February 2022.

Therefore, for exclusion criteria, systematic reviews or meta-analyses were excluded if they included studies other than RCTs (quasi-experimental studies or open trials), whose participants were >19 years old or whose sample had another main diagnosis (such as an anxiety disorder), did not have a diagnosis of a depressive disorder or had depressed symptoms, as well as eliminating those reviews that included psychotherapy applied only to the parents of minors, that is, interventions aimed at training parents.

Publications focusing exclusively on prevention and those evaluating the effectiveness of transdiagnostic treatments were also excluded. Reviews that analysed the efficacy of pharmacological treatments (also compared and combined with psychotherapy) or other interventions from a perspective other than psychology (e.g., pseudo-therapies or sport) were discarded and those that did not provide sufficient data on any of the previously named inclusion criteria.

Considering the high comorbidity in infantile-juvenile depression, no restrictions were established, and it was only agreed to exclude reviews that included samples with developmental problems or deficits in cognitive functioning, such as autism, as they could affect the response to treatment.

Finally, due to the difficulty of finding studies aimed at the population of interest that met all the inclusion criteria, it was determined that those systematic reviews and meta-analyses that provide separate information on the outcome of interventions for infant-juvenile depression according to pre-established criteria.

Search strategy

In order to identify eligible publications, a comprehensive search strategy was developed using keywords, which were combined to locate all relevant reviews from the last two decades examining the effects of psychotherapy on the treatment of infant-juvenile depression.

The search was carried out mainly in the two large databases *Web of Science* and *Scopus*, and the terms used were: ("depression" OR "depressed" OR "mood disorder") AND ("children" OR "adolescen*" OR "teenagers") AND ("treatment" OR "psychointervention" OR "psycho-intervention" OR "intervention*" OR "psychotherapy" OR "psycho-therapy" OR "therapy" OR "counsel*") AND ("systematic review" OR "literature review" OR "meta-analysis" OR "metaanalysis") alternating the booleans AND and OR in order to obtain as many combinations as possible. Similarly, reference lists of retrieved articles were reviewed and examined to identify other possible revisions not collected during the database search.

Study selection

An Excel file was developed to export all results and duplicates were removed using Mendeley software. After this process, the articles were analysed and selected by two authors (ASL and JPE), who followed the inclusion and exclusion criteria previously established. To do this, ASL conducted a first screening based on the title and abstracts, and then ASL and JPE examined the full text of those revisions to select those articles that were finally included in this study. ASL examined the reviews and JPE verified the decisions. Disagreements were resolved through discussion and consultation with an independent third reviewer (AMS).

Data extraction

Two tables were developed for data extraction to collect and synthesize in a structured format all the relevant information of the revisions and meta-analyses included in the work. Once again, ASL and JPE were responsible for this task. ASL extracted the data, JPE verified the extracted data and disagreements were resolved through discussion with a third author (AMS).

Thus, the data extracted in the first table were: a) first author and year of publication, b) aims, c) search strategy, d) type and number of studies included, e) participants' characteristics (total number of

participants, age range and mean, diagnosis of the sample and, if provided, country/nationality), f) intervention's characteristics (type of psychotherapy, delivery format (individual or group) and duration), g) professionals providing the intervention, h) outcome measures and i) funding sources for the review.

The second table collected the following information: a) first author and year of publication, b) risk of bias, c) main findings and d) effect estimates (if a meta-analysis was performed).

Assessment of quality and risk of bias

In order to assess the methodological quality and risk of bias of the systematic reviews and meta-analyses included, two independent authors, ASL and JPE, used AMSTAR-2, a tool composed of 16 items that allows the critical evaluation of the quality of systematic reviews that include RCTs, not RCTs or both and provides a global quality rating (Shea et al., 2017). In case of disagreement, consensus was reached through discussion.

Results

Identification and selection of studies

In the initial bibliographic search, 3,492 publications were identified and 37 additional records were incorporated after the revision of references. The duplicates were then eliminated and a total of 3,032 records were examined on the basis of their title and abstract, carrying out a first screening, after which 2,890 publications were excluded. A selection of 142 potentially relevant records were reviewed in full text, carrying out the second and last screening. Finally, after their evaluation, 8 studies met the eligibility criteria and were included in the present umbrella. The remaining 134 were excluded for different reasons, which are indicated in the flowchart PRISMA (2020), where the entire selection process is collected.

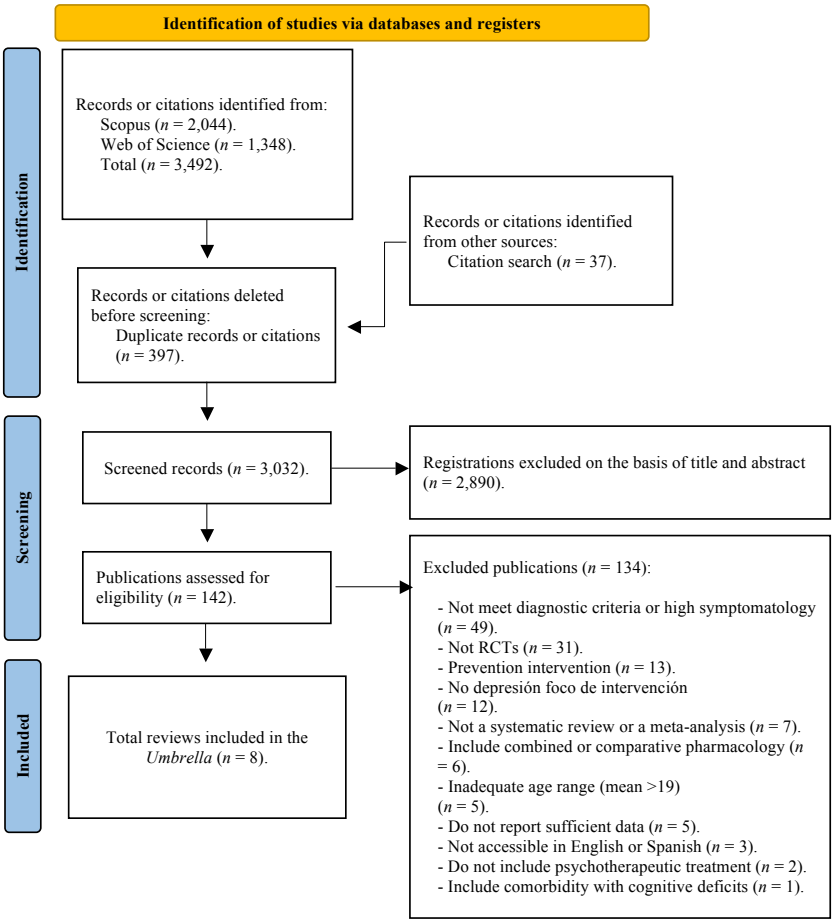
Study Characteristics

The information on the general characteristics of the systematic reviews and the meta-analyses included is summarized in Table 1.

The eight revisions were published between 2006 and 2021. Two of them met all the inclusion criteria and were analysed in their entirety, while of the remaining six the information relevant to the present study object was analysed. This was mainly due to the fact that most of the studies used samples that included depressive symptoms together with participants who presented a diagnosis of a depressive disorder, but performed an independent analysis of the data.

Therefore, the results of 124 studies were analysed in this review of reviews, all of them randomized controlled trials (RCTs). The number of participants included was 6,952, although the revisions of Cuijpers et al. (2020) and Cuijpers et al. (2021) did not provide information. Participants ranged in age from 3 to 19 years. All studies included a variety of diagnoses of depressive disorders, highlighting the diagnosis of major depressive disorder, dysthymia, resistant depression, the diag-

Figure 1. PRISMA Flowchart (2020).



Note: n= number of studies; RCT= Randomized Controlled Trial.

nosis of a depressive disorder not otherwise specified, minor depression and intermittent depression.

Characteristics of psychological interventions

The eight systematic reviews attempted to evaluate the effectiveness of psychological interventions in the treatment of depressive disorders in the infant-juvenile population (see Table 1 for a summary of the characteristics of psychological interventions).

Seven different psychotherapies were included: CBT was the most studied (*n*=7; 87.5%) (Cuijpers et al., 2020; Cuijpers et al., 2021; Forti-Buratti et al., 2016; Klein et al., 2007; Méndez et al., 2021; Weisz et al., 2006; Zhou et al., 2020), as well as interpersonal therapy (IPT) (*n*=7; 87,5%) (Cuijpers et al., 2020; Cuijpers et al., 2021; Klein et al., 2007; Méndez et al., 2021; Pu et al., 2017; Weisz et al., 2006; Zhou et al., 2020), followed by family therapy (*n*=5; 62.5%) (Forti-Buratti et al., 2016; Klein et al., 2007; Méndez et al., 2021; Weisz et al., 2006; Zhou et al., 2020), psychodynamic therapy (*n*=3; 37.5%) (Forti-Buratti et al., 2016; Méndez et al., 2021; Zhou et al., 2020), behaviour therapy (*n*=3; 37.5%) (Cuijpers et al., 2021; Méndez et al., 2021; Zhou et al., 2020), computerised CBT (*n*=2; 25%) (Forti-Buratti et al., 2016; Zhou et al., 2020), problem-solving therapy (*n*=1; 12.5%) (Zhou et al., 2020) and supportive therapy (*n*=1; 12,5%) (Zhou et al., 2020).

Similarly, several reviews evaluated the impact on depression in children and adolescents of other specific interventions such as bibliotherapy-based CBT (*n*=2; 25%) (Méndez et al., 2021; Weisz et al., 2006) and family therapy based on emotional development (*n*=1; 12.5%) (Forti-Buratti et al., 2016), as well as other treatments with psychological components such as non-directive supportive therapy (*n*=3; 37.5%) (Klein et al., 2007; Méndez et al., 2021; Weisz et al., 2006).

Table 1. Characteristics of included Systematic Reviews and Meta-analyses.

First author (year of publication)	Aims	Search strategy	Type and number of studies	Participants' characteristics	Intervention's characteristics	Professionals providing the intervention	Outcome measures	Funding sources
Cuijpers et al. (2020)*	a) Compare the effects of psychotherapy for depression between different age groups. b) Examine whether the results reported differ by age group.	For the search for psychotherapy in children and adolescents: Databases: PubMed y PsycINFO. Search terms: (Psychotherapy OR psychotherap* OR cbt OR "behavior therap*" OR "behaviours therapeutic" OR "behavioural therap*" OR "behavioural treatments" OR "cognition therap*" OR "cognition treatment*" OR psychodynamic OR psychoanalysis OR counsel* OR "problem-solving" OR mindfulness OR (acceptance AND commitment) OR "assertiveness training" OR "behavioral activation" OR "cognitive therap*" OR "cognitive treatment*" OR "cognitive restructuring" OR ("compassion-focused" OR "compassion focussed")) AND (therapeutics OR therapy OR therape OR treatment) AND (constructivist* OR "metacognitive therap*" OR "metacognitive treatment*" OR "meta-cognitive therap*" OR "meta-cognitive treatments*" OR "solution-focussed therap*" OR "solution focussed therap*" OR "self-control therap*" OR "self-control training" OR "self control therap*" OR "self control training*") AND ("Depressive Disorder" OR dysthymi* OR "affective disorder*" OR "mood disorder*" OR depression OR depress* OR "dysthymic disorder") AND (("randomized controlled trial" OR "controlled clinical trial" OR randomized OR randomly NOT animals NOT (animals AND humans).	*N*= 5 RCTs in children (<13) and 15 in adolescents (13 to 18 years old) of 366 total RCTs.	a) Children up to 13 years old with a mean of 10,6 (SD= NR), 50,2% girls. All of them had a diagnosis of a depressive disorder and the samples were collected in the US (80%) and in the United Kingdom (20%). b) Adolescents in the 13-18 range (m= 15,45; SD= NR), 63,73% girls. The entire sample presented a diagnosis of depressive disorder according to a diagnostic interview and the origin of the sample was US (80%), Europe (6,67%), Canada (6,67%) and Others (6,67%).	In the sample of children: Psychotherapies: Individual CBT Group CBT Others: WL condition (from 9 to 15 sessions) In the sample of adolescents: Psychotherapies: Group CBT Individual CBT Individual IPT Others: WL condition TAU (from 8 to 24 sessions)	Not reported.	Priority was given to the information reported by the parents and the results provided by the following measures: HAMD BDI-I BDI-II PHQ-9 CES-D HADS-D CDI RADS	Not reported.

First author (year of publication)	Aims	Search strategy	Type and number of studies	Participants' characteristics	Intervention's characteristics	Professionals providing the intervention	Outcome measures	Funding sources
Cuijpers et al. (2021)*	a) Examine binary results using the validated method to estimate these results. b) Examine response, clinically significant change, clinically significant deterioration, and recovery as outcomes.	Databases: PubMed, PsycINFO, Embase and Cochrane Library. Trials were also identified by analysing another recent meta-analysis for recovery. Search terms: (Psychotherapy OR psychotherap* OR cbt OR "behavior therap*" OR "behaviours therapeutic" OR "behavioural therap*" OR "behavioural treatments" OR "cognition therap*" OR "cognition treatment*" OR psychodynamic OR psychoanalysis OR counsel* OR "problem-solving" OR mindfulness OR (acceptance AND commitment) OR "assertiveness training" OR "behavioral activation" OR "cognitive therap*" OR "cognitive treatment*" OR "cognitive restructuring" OR ("compassion-focused" OR "compassion focussed")) AND (therapeutics OR therapy OR therape OR treatment) AND (constructivist* OR "metacognitive therap*" OR "metacognitive treatment*" OR "meta-cognitive therap*" OR "meta-cognitive treatments*" OR "solution-focussed therap*" OR "solution focussed therap*" OR "self-control therap*" OR "self-control training" OR "self control therap*" OR "self control training*") AND ("Depressive Disorder" OR dysthymi* OR "affective disorder*" OR "mood disorder*" OR depression OR depress* OR "dysthymic disorder") AND (("randomized controlled trial" OR "controlled clinical trial" OR randomized OR randomly NOT animals NOT (animals AND humans).	*N*= 17 RCTs of 40 total RCTs.	a) Children and adolescents up to 18 years old (m= 14,31; SD= NR), 62,18% girls. b) The entire sample presented a diagnosis of depressive disorder according to a diagnostic interview. c) The origin of the sample was US (76,47%), United Kingdom (11,76%), Europe (5,88%) and Others (5,88%).	Psychotherapies: Individual CBT Group CBT Individual IPT Individual BT Others: WL condition TAU (from 8 to 41 sessions)	Not reported	BDI BDI-II CDI CDI-II HAMD MFQ-C CDRS-C	This research did not receive external funding.
Forti-Buratti et al. (2016)	a) Evaluate the efficacy of psychological treatments for depression in preteen children (12 years and younger).	Databases: Embase, Medline, PsycINFO, Web of Knowledge (including Web of Science, BIOSIS Citation Index, Current Contents Connect, Derwent Innovations Index, CABI: CAB Abstracts, Chinese Science Citation Database, Data Citation Index, Journal Citation Report). Published and unpublished studies (including dissertations) were included and additional trials were also sought in systematic reviews and published meta-analyses. Search terms: (psychotherapy OR "psychological treatment" OR "particular intervention") AND (depression OR "depressive disorder") AND "child OR adolescent) AND (random OR "clinical trial").	*N*= 7 RCTs.	a) *n*= 219 participants. b) Age range 3-12. c) Participants had MDD, moderate MDD, dysthymia and/or resistant depression. d) The sample was collected in US (57,14%), United Kingdom (14,28%), Australia (14,28%) and England, Greece and Finland (14,28%).	Psychotherapies: Individual CBT Group CBT CBTc PDNT FT FT based on emotional development Others: TAU WL condition No treatment Psychological PL (from 6 to 30 sessions - from 5 to 12 weeks)	Not reported.	PAPA PFCS CDI BDI CDRS AWBS MFQ RADS	For this study, the researchers received funding from the Alicia Koplowitz Foundation (a fellowship to MAF) and were supported by the NIHR Biomedical Research Center award to Imperial College London.

First author (year of publication)	Aims	Search strategy	Type and number of studies	Participants' characteristics	Intervention's characteristics	Professionals providing the intervention	Outcome measures	Funding sources
Klein et al. (2007)	a) Explain the differences between early and recent meta-analytical estimates of the effects of cognitive behavioural therapy (CBT) on adolescent depression. b) Elucidate the relationship between methodology and observed results. c) Quantify the acute and follow-up effectiveness of CBT for young people with major depression. d) Systematically assess the methodological rigour of CBT trials for this population.	Databases: PsycINFO and Medline. References from identified studies evaluating CBT results were also reviewed. Search terms: "depression", "dysthymia" and "major depression" with limited searches for populations of children and adolescents.	*N*= 11 RCTs.	a) *n*= 809 participants. b) Age range 8-18 (mean between 12,7 and 16.2). c) Presented MDD and/ or dysthymia according to a diagnostic interview or compliance with the diagnostic criteria of the DSM in any of its versions or the RDC. c) Populations included students, outpatients, outpatient children and youth in the juvenile justice system.	Psychotherapies: Individual CBT Group CBT Individual IPT Individual FT Individual NDST Others: Relaxation Psychological PL Pill PL WL condition (from 5 to 16 sessions - 17,60 hours of therapy on average)	It is reported that the treatment was performed in clinical settings in 5 RCTs, so the intervention was provided by a health professional.	Not reported.	The authors state that they have no financial relationships to disclose.
Méndez et al. (2021)*	a) Analyse, from a historical perspective, the state of psychological treatments for adolescent depression according to the criteria of evidence. b) Provide healthcare professionals with guidelines for choosing the most appropriate treatment based on current evidence.	Databases: PsycINFO, PubMed, ERIC, Web of Science and CSIC-ISOC. Websites of institutions such as Division 53, Society of Clinical Child and Adolescent Psychology of the American Psychological Association (APA), National Institute for Health and Care Excellence (NICE) and the Sistema Nacional de Salud (SNS) of Spain. Primary studies were also recovered from systematic reviews and meta-analyses. Search terms: Not reported.	*N*= 22 RCTs of psychotherapy of 27 total RCTs.	a) *n*= 2.295 participants of 3.501 included, 66,6% girls. b) The samples included an age range of 8-18 (m= 15,0; SD = NR). c) Participants had MDD (87,4%), dysthymia (10%), DDNOS (0,9%) and another depressive disorder (such as resistant depression) (5%). d) Diversity in family structure, socio-economic status and ethnicity. e) 12 RCTs of psychotherapy with 1.277 adolescents presented comorbid disorders: anxiety disorders (43,1%), disruptive and behavioural disorders (28,3%), attention deficit hyperactivity disorder (17%) and other disorders (26,6%). A RCT identified comorbidity in its participants with inflammatory bowel disease: Crohn's disease (75%) or ulcerative colitis (25%).	Psychotherapies: Individual CBT Group CBT Bibliotherapy-based CBT Individual IPT Group IPT FT BT NDST PDNT Others: Relaxation Social skills training Reiki method Psychological PL Pill PL WL condition TAU (ftom 2 to 30 weeks)	Not reported.	CES-D BDI BDI-II CBCL-D SMFQ MFQ MFQ-C K-SADS HRSD CDRS-R QIDS CDI-2	This research did not receive external funding.

First author (year of publication)	Aims	Search strategy	Type and number of studies	Participants' characteristics	Intervention's characteristics	Professionals providing the intervention	Outcome measures	Funding sources
Pu et al. (2017)*	a) Evaluate the effectiveness and safety of IPT for adolescent depression. b) Evaluate the effectiveness and acceptability of IPT for depression in adolescents.	Databases: PubMed, Cochrane, EMBASE, PsycINFO, Web of Science, and CINAHL. Additional eligible studies were also identified by scanning the reference lists of relevant studies. Search terms: (depress* or dysthymi* OR "mood disorder*" OR "affective disorder*" OR "adjustment disorder*") AND (adolesc* OR preadolesc* OR pre-adolesc* OR child* OR boy* OR girl* OR infant* OR juvenil* OR minors OR paediatri* OR pediatri* OR pubescen* OR puberty OR school* OR student* OR teen* OR young OR youth* OR class* OR orphan* OR high-school OR "high school" OR preschool* OR pre-school*) AND (psychotherap* OR psychological OR interpersonal OR "interpersonal therapy" OR "interpersonal psychotherapy" OR IPT*).	*N*= 4 RCTs of 7 total RCTs.	a) n= 231 participants of 538 included. b) All studies recruited only adolescents with an age range of 12-18. c) All were patients diagnosed with a depressive disorder according to the diagnostic criteria of the DSM in any of its versions.	Psychotherapies: Individual IPT Others: WL condition Psychological PL TAU (12 sessions - from 6 to 16 weeks)	Not reported.	HAMD-24 CDI-27 BDI-21	This study was supported by the National Basic Research Program of China (973 Program, Grant nº 2009CB918300); Natural Science Foundation of China (Grant nº 31300881); and Postdoctoral Scientific Research Projects of Chongqing (Grant nº Xm2015083).
Weisz et al. (2006)*	a) Evaluate the effects of the most widely proven treatment gender of juvenile depression: psychotherapy. b) Determine the overall effect of psychotherapy on juvenile depression. c) Identify how long-lasting the effects of psychotherapy are for juvenile depression. d) Determine whether the effects of psychotherapy are specific to depression or are generalized to other conditions. e) Comprobar si la psicoterapia juvenil supera las condiciones de control activo. f) Check whether juvenile psychotherapy exceeds active control conditions. f) Assess whether treatments that emphasize cognitive change are more effective than treatments that lack cognitive emphasis. g) Assess whether juvenile psychotherapy is effective in clinically representative conditions.	Databases: PsycINFO, Dissertation Abstracts International and MEDLINE. Reference lists of relevant review articles and reference tracks of outcome studies were also examined. A manual search was conducted in all issues from 1965 to 2004 of those journals in which at least five psychotherapy studies were identified through computer searches and referrals; and personal communications were established with relevant study authors to identify any additional relevant studies. Search terms: "depression", "dysthymia" and "major depression" with limited searches for populations of children and adolescents.	*N*= 16 RCTs of 35 total RCTs.	a) n= 1.229 participants of 2.095 included, 62,5% girls. b) The samples recruited participants with an age range of 8-18. c) They presented MDD, dysthymia, MinDD, DDNOS and/ or intermittent depression according to a diagnostic interview or compliance with the diagnostic criteria of the DSM in any of its versions or the DRC.	Psychotherapies (group and individual): CBT Bibliotherapy-based CBT IPT FT NDST Others: Relaxation Social skills training WL condition Psychological PL Pill PL TAU Symptom monitoring (mean= 13,3 hours; SD= 7,3)	Not reported.	Not reported.	Not reported.

First author (year of publication)	Aims	Search strategy	Type and number of studies	Participants' characteristics	Intervention's characteristics	Professionals providing the intervention	Outcome measures	Funding sources
Zhou et al. (2020)*	a) Synthesize all available evidence of antidepressants, psychotherapies and their combinations commonly used for the acute treatment of depressive disorder in children and adolescents. b) Compare and classify all available treatment interventions for the acute treatment of depressive disorders in children and adolescents.	Databases: PubMed, Embase, the Cochrane Central Register of Controlled Trials, Web of Science, PsycINFO, ProQuest, CINAHL and LiLACS. In addition, manual searches of published, unpublished and ongoing RCTs were conducted on international trial registries, drug approval agency websites, key scientific journals, and summaries of field conferences, and relevant essay reference lists or review appendices. As well as contacting the authors of the study to request complete reports of the original articles or data from unpublished studies. Search terms: (depress* or dysthymi* OR "mood disorder*" OR "affective disorder*") AND (adolesc* OR child* OR boy* OR girl* OR juvenil* OR minors OR paediatri* OR pediatri* OR pubescen* OR school* OR student* OR teen* OR young* OR youth OR preschool OR "pre- school*") AND (psychother* OR psychological* OR cogniti* OR behavio* OR CBT OR "family therap*" OR interpersonal OR relaxation OR bibliotherap* OR "play therap*" OR "physical reinforcement" OR "reinforced practice" OR exposure* OR consultation* OR biofeedback* OR "social skill*" OR "client centered*" OR counsel* OR exercise* OR psychoeducation* OR supportive* OR "mental health*" OR "activity scheduling"" OR art* OR dance* OR dialectic* OR "emotion focus*" OR "focus-oriented" OR humanistic* OR integrative* OR integrated* OR metacognitive* OR meta cognitive* OR nondirective* OR non-directive* OR "problem solving*" OR psychodynamic* OR "rational emotive*" OR "self control*" OR "self talk*" or "self help*" OR "stress management*" OR "mind training*" OR "functional analys*" OR psychoanaly* OR psychodrama* OR "role play*" OR mindfulness*).	*N*= 27 RCTs of psychotherapyof 71 total RCTs.	a) *n*= 2.169 participants of 9.510 included. b) Age range 3-19 (m= 14,17; SD= NR). c) Participants presented MDD, dysthymia, MinDD, DDNOS and/ or intermittent depression according to the diagnostic criteria of the DSM in any version or based on a diagnostic interview. d) The sample was collected in US (62,96%), United Kingdom (11,12%), Europe (3,7%), Canada (3,7%), Australia (3,7%), Iran (3,7%), China (3,7%), Norway (3,7%) and Turkey (3,7%).	Psychotherapies (group and individual): CBT CBTc IPT BT PDNT FT PST SupT Others: Psychological PL TAU WL condition (from 6 to 39 weeks)	Not reported.	CDI HAMD-14 HAMD-17 HAMD-24 BDI-21 MFQ SMFQ QIDS-A-Pat CDRS-R	This study was financed by the National Key Research and Development Program of China (2017YFA0505700).

*Note: AWBS= Adolescent Well Being Scale; BDI= Beck Depression Inventory; BT= Behaviour Therapy; CBCL-D= Child Behavior Checklist-Depression; CBT= Cognitive-Behavioural Therapy; CBTc= computerised Cognitive-Behavioural Therapy; CDI= Children's Depression Inventory; CDRS-R= Children's Depression Rating Scale-Revised; CES-D= Center for Epidemiologic Study Depression Scale; DDNOS= Depressive Disorder Not Otherwise Specified; DSM= Diagnostic and Statistical Manual of Mental Disorders; FT= Family Therapy; HADS-D= Hospital Anxiety and Depression Scale; HAMD= Hamilton Rating Scale for Depression; HRSD= Hamilton Rating Scale for Depression; IPT= Interpersonal Therapy; K-SADS= Kiddie-Schedule for Affective Disorders and Schizophrenia for School-Age Children; m= mean; MDD= Major Depressive Disorder; MFQ= Mood and Feelings Depression Questionnaire; MFQ-C= Mood and Feelings Depression Questionnaire, Child version; MinDD= Minor Depressive Disorder; N= number of studies; n= number of participants; NDST= Non-Directive Supportive Therapy; NR= Not reported; PL= Placebo; PAPA= Preschool Age Psychiatric Assessment; PDNT= Psychodynamic Therapy; PFCS= Preschool Feelings Checklist Scale; PHQ-9= The Depression Scale Of The Patient Health Questionnaire; PST= Problem-Solving Therapy; QUIDS= Quick Inventory of depressive symptomatology; QUIDS-A-Pat= Quick Inventory of depressive symptomatology, adolescent version; RADS= Reynolds Adolescent Depression Scale; RCT= Randomized Controlled Trials; RDC= Research Diagnostic Criteria; SD= Standard Deviation; SMFQ= The Short Mood and Feelings Depression Questionnaire; SupT= Supportive Therapy; TAU= Treatment As Usual; US= United States; WL= Wait-list Condition. *Information relevant to the present umbrella was extracted following the aim of this study, as these reviews and meta-analyses provided specific results on the population of interest, which allowed for independent analysis.*

The most used control condition was wait-list (*n*=8; 100%) and treatment as usual (*n*=7; 87.5%) (Cuijpers et al., 2020; Cuijpers et al., 2021; Forti-Buratti et al., 2016; Méndez et al., 2021; Pu et al., 2017; Weisz et al. 2006; Zhou et al., 2020).

Regarding the format of psychotherapy, 5 reviews (62.5%) included studies applying interventions in both group and individual modality (Cuijpers et al., 2020; Cuijpers et al., 2021; Forti-Buratti et al., 2016; Klein et al., 2007; Méndez et al., 2021), 2 (25%) reported to include interventions in both modalities (group and individual) but did not explain what format each type of psychotherapy had adopted (Weisz et al., 2006; Zhou et al., 2020), 1 review (12.5%) included exclusively studies with an individual format (Pu et al., 2017). In addition, no studies reported information about the professionals providing the interventions, but one review (Klein et al., 2007) indicated that the treatment was performed in clinical settings in 5 RCTs, so it can be understood that the intervention was provided by a health professional.

With regard to the duration of treatment, there were differences in the way data were provided, since reviews used weekly measures (*n*=2; 25%) (Méndez et al. 2021; Zhou et al., 2020), others evaluated the sessions of the interventions (*n*=3; 37.5%) (Cuijpers et al., 2020; Cuijpers et al., 2021; Klein et al., 2007) and others used both methods (*n*=2; 25%) (Forti-Buratti et al., 2016; Pu et al., 2017), except Weisz et al. (2006) which reported an average duration of 13.3 hours (*SD*=7.3). Therefore, the interventions were developed in a range of 2 to 30 weeks and from 5 to 41 sessions.

Finally, the main evaluation tools used to evaluate children and adolescents depression were: the Beck Depression Inventory (BDI; Beck et al., 1996) and the Children's Depression Inventory (CDI; Kovacs, 1992), present at all reviews, except those of Klein et al. (2007) and Weisz et al. (2006), which did not provide information on the outcome measures, followed by Hamilton Depression Rating Scale (HAMD and HRSD; Cusin et al., 2009), by the Children's Depression Rating Scale (CDRS-R) (Poznanski & Mokros, 1996) and by the Mood and Feelings Questionnaire (MFQ; Wood et al., 1995).

Effectiveness of psychological interventions

The summary of the main results found in the systematic reviews and meta-analyses included is presented in Table 2.

Of the 8 reviews, all provided a qualitative and quantitative synthesis of the results of the individual studies, so all conducted a meta-analysis, with the exception of Méndez et al. (2021), which performed a narrative analysis. Overall, reviews reported on the effectiveness of psychological interventions in decreasing depressive symptoms in post-treatment.

The reviews analysed confirmed the efficacy of psychotherapy in the treatment of child and young people depression, since a reduction of depressive symptoms was found clinically significant in young people who had received a psychological intervention in front of the control group, both active and passive (Cuijpers et al., 2020; Cuijpers et al., 2021; Weisz et al., 2006). In addition, psychological interventions for depression in children and adolescents also showed generality and specificity, as anxiety symptoms among participants were reduced but externalizing problems such as behavioural problems were not reduced, as reflected in the meta-analysis by Weisz et al. (2006). It was also confirmed that the positive effects of psychotherapy remain for months after treatment, but that more evidence is needed with respect to long-term effects (Weisz et al., 2006).

Concretely, although Weisz et al. (2006) concluded that treatments that include cognitive components do not present better results than noncognitive approaches (such as IPT), subsequent reviews and meta-analyses identified significant differences in favour of CBT as a treatment for infantile-juvenile depression, demonstrating the efficacy of this specific psychotherapy against the control group in samples of adolescents (Klein et al., 2007) and facing the waiting list in mixed samples (Zhou et al., 2020); therefore, following the results found by Méndez et al. (2021) in their systematic review, CBT in individual modality can be considered a *well-established treatment* for adolescent depression according to the criteria of the *Journal of Clinical Child and Adolescent Psychology* and *possibly efficacious* when applied in group. The review also concluded that both computerized CBT and bibliotherapy-based CBT are in the *experimental phase*, as they did not show significant symptom reduction.

However, it should be noted the difficulties encountered in the meta-analyses that evaluated the effects of treatments for depression in children, since, after the study of this population, Forti-Buratti et al. (2016) concluded that there is not enough evidence to allow us to confidently evaluate the effectiveness of psychological interventions, so, although CBT is the most studied therapy for this age range, even for this therapy the number of participants included in the trials is relatively small and therefore there is no clear evidence that the treatment is effective.

On the other hand, it was found that individual IPT is an effective and acceptable intervention for juvenile depression, showing a much higher efficacy than all psychological controls (Pu et al., 2017; Zhou et al., 2020) and improvements in the quality of life and functioning of adolescents were identified (Pu et al., 2017). This type of therapy can be considered a *well-established individual treatment* for adolescent depression and an *experimental treatment* in group format, not working with representative samples (Méndez et al., 2021).

With respect to family therapy, there were mixed results between the reviews and meta-analyses analysed, so it could be considered a *possible efficacious treatment* in adolescents (Méndez et al., 2021), while the evidence found on the efficacy of family therapy aimed at treating depression in samples of children is very weak, so no firm conclusions can be drawn (Forti-Buratti et al., 2016). Similarly, it happens with psychodynamic therapy, for which no evidence was found either in favour of children (Forti-Buratti et al., 2016) or adolescents (Méndez et al., 2021), or in mixed samples (Zhou et al., 2020), so the absence of significant differences suggests that psychodynamic therapy is an *experimental treatment* at this time (Méndez et al., 2021).

Finally, the meta-analyses analysed demonstrated the superiority of supportive therapy and problem-solving therapy to the wait-list condition (Zhou et al., 2020), and identified inconsistent outcomes in relation to behavioural therapy with respect to the control group (Zhou et al., 2020).

Methodological quality and risk of bias

The results of the evaluation of the methodological quality and risk of bias of the systematic reviews and meta-analyses included are summarized in Table 3. Following the quality rating provided by the AMSTAR-2 tool (Shea et al., 2017), half of the studies (*n*=4) presented a low quality, as they had a critical weakness with or without weak points, while the other half (*n*=4) were rated as critically low because they had more than one critical weakness. This is mainly because most reviews do not report on the creation of a protocol prior to conducting the meta-analysis, as required in Item 2, does not provide a list of excluded studies and justification for exclusions (Item 7) or does not report on funding sources for RCTs (Item 10).

Table 2. Summary of Results

First author (year of publication)	Risk of bias	Main findings	Effect estimates (if meta-analysis was performed)
Cuijpers et al. (2020)	The risk of bias was measured by the analysis of 4 criteria: adequate generation of the allocation sequence, concealment of the assignment to the conditions, masking of the evaluators and dealing with incomplete result data. Of the RCTs composed of a sample of children, 3 presented a high risk of bias and 2 a risk of unclear bias. Of the RCTs that evaluated the efficacy of treatments in a sample of adolescents, 5 presented a high risk of bias, 8 presented an unclear risk of bias and the remaining 2 presented a low risk of bias, since they met all the quality criteria.	a) Statistically significant improvement was identified between the experimental group and the control group of children and adolescents with a diagnosis of a depressive disorder, which demonstrated the efficacy of psychotherapy in the treatment of infant-juvenile depression. b) Although psychotherapies for children and adolescents diagnosed with depression showed medium sizes of effect, these were significantly smaller than those found in adults so treatments might not be as effective for this population as for other age cohorts. c) For the interpretation of the results should be taken into account the low quality of the studies, especially those that include samples <13 years, since this condition can hinder the establishment of firm conclusions, reason why further study of psychotherapy for depression in children would be recommended.	Efficacy: Interventions focused on children with a depressive disorder: N= 5; *g of Hedge's* = 0.58; 95% CI: -0.10 to 1.25; (p < .001). Interventions focused on adolescents with a depressive disorder: N= 15; *g of Hesge's* = 0.56; 95% CI: 0.24 to 0.88; (p < .001).
Cuijpers et al. (2021)	The risk of bias was measured by the analysis of 4 criteria: adequate generation of the allocation sequence, concealment of the assignment to the conditions, masking of the evaluators and dealing with incomplete result data. Of the RCTs analysed, 5 presented a high risk of bias, 9 a risk of unclear bias and the remaining 3 presented a low risk of bias, since they met all the quality criteria.	a) A clinically significant improvement was found in young people in therapy compared to control groups. b) When subgroup analysis was performed, significant differences were identified in participants with a diagnosis of a depressive disorder, since the response rate was considerably higher in RCTs targeting this population compared to studies in which participants had to score above a limit. c) Psychotherapies for depression in young people are effective compared to control conditions, but more effective treatments and treatment strategies are needed.	Response rate of interventions focused on children and adolescents with a depressive disorder: N= 17; ES = 0.43; 95% CI: 0.33 to 0.54; (p = 0.04).
Forti-Buratti et al. (2016)	The risk of bias was assessed using an adapted version of the Jadad score. 4 of the RCTs analysed had the highest adapted Jadad score (5/5) and otor trial achieved a score of 4/5, so they presented a low risk of bias. A RCT obtained a score of 3/5, evidencing an unclear risk of bias, since the blinding of the evaluator was not reported. While the remaining RCT obtained a score of 1/5, indicating a high risk of bias, it did not report any description of blinding or random allocation method.	a) Not enough evidence to allow to confidently evaluate the effectiveness of psychological interventions for children 12 years of age or younger with depression, so, from these data, it is not possible to draw firm conclusions about the efficacy of specific psychotherapies aimed at this population. This is due to the lack of studies investigating depression in this age group and the small size of the samples used. b) CBT is the therapy most studied for this age range, but even for this therapy, the number of trial participants is relatively small and therefore there is no clear evidence that treatment is effective. Similarly, for other psychological treatments, such as FT and PDNT the evidence base is even weaker. c) Given the prevalence and significant impact of this disorder, further research is absolutely necessary, with a larger number of participants since there is an urgent need to establish the effectiveness or not of the psychological intervention.	Efficacy: - CBT vs. control (both active and passive). (SMD = -0.342; 95% CI: -0.961 to 0.278; p = 0.280).
Klein et al. (2007)	The number of CONSORT criteria met in each study ranged from 14 to 21 (mean 17.4). The unfulfilled criteria reflected a lack of attention to the way in which sample sizes were determined, the methods used to generate and implement random group assignment, the blinding of researchers to the allocation of groups and the incidence of adverse effects.	a) Significant differences were identified in favor of CBT as a treatment for adolescent depression, so the results of the meta-analysis support the efficacy of this specific psychotherapy. b) With regard to previous meta-analyses, it was found that the effects of CBT have decreased since the CBT study was initiated as a treatment for juvenile depression and that confidence intervals have become narrower. This can be explained by the methodological differences seen in recent RCTs compared to early research, as the smaller treatment effects were associated with the comparison of the effects of CBT with the control conditions of active treatment, the administration of treatment in clinical settings and the application of greater methodological rigour. c) In order to promote greater methodological rigour in future trials, it will be important for researchers to conduct future studies based on the CONSORT (*Consolidated Standards of Test Reports*).	Efficacy: - CBT vs. control (both active and passive). (SMD = 0.53; 95% CI: 0.24 to 0.82).

Méndez et al. (2021)	Not reported.	Following the criteria of the *Journal of Clinical Child and Adolescent Psychology*: a) CBT is the most studied psychotherapy and it has been shown that, applied individually, it is superior to FT, NDST, relaxation training, Reiki method, treatment as usual, psychological placebo and wait-list condition. Therefore, CBT in individual mode is a well-established treatment. b) CBT has shown positive evidence when applied in a group, being superior to social skills training and wait-list condition, so it could be considered a probably effective treatment. c) Both CBTc and bibliotherapy-based CBT showed no significant symptom reduction and are therefore in the experimental phase. d) Individual IPT is presented as a well-established treatment for adolescent depression because there are at least two RCTs in which it has been as effective as CBT (a proven treatment) and superior to the treatment as usual. e) The group IPT would be in an experimental phase because the samples used by the RCTs analysed are not representative. f) Mixed results were obtained in RCTs that analysed the efficacy of FT, since in two trials the FT was superior to the treatment as usual and the wait-list condition, while in the other two trials no differences were found with respect to the usual treatment and SupT and it was found to be lower than CBT. Therefore, the status of the FT would possibly be effective. g) Short-term PDNT was not more effective than CBT or a short-term psychosocial intervention, so the absence of significant differences in outcome suggests that PDNT is an experimental treatment at this time.	Not reported.
Pu et al. (2017)	The 4 RCTs had a low risk of bias.	a) IPT is an effective and acceptable intervention for adolescents with depression. b) Compared to control conditions, IPT is an effective treatment to reduce symptoms of depression and increase response/remission rates after treatment in adolescents with depression. c) IPT can significantly improve quality of life and functioning in adolescents and reduce dropout or interruption rates (for any reason) of treatment.	Efficacy of interventions targeting adolescents with depressive disorders defined by DSM: - IPT vs. control (both active and passive). (SMD = -0.81; 95% CI: -1.09 to -0.54; $p < .001$).
Weisz et al. (2006)	Not reported.	a) Treatments for juvenile depression appear to produce effects that are significant but modest in their strength, breadth and durability. b) The authors applied rigorous analytical methods and identified significant effects of psychotherapy for children and adolescents depression, although markedly more modest than those reported in previous meta-analyses and for other conditions. c) The mean ESs of the studies with diagnosed samples and the RCTs that recruited participants with high symptomatology did not differ significantly. In addition, studies using a diagnosis included older participants. d) Treatments that include cognitive components did not perform better than non-cognitive approaches (such as IPT). e) The effects of psychotherapy for depression in children and adolescents showed generality (anxiety was reduced) and specificity (externalization problems were not reduced). f) The effects appear to be lasting for the first few months after treatment; however, more evidence is needed regarding long-term effects. g) Much has been achieved in 25 years of research on the treatment of juvenile depression, but important work remains. Critical examination of evidence suggests the need for greater use of active control conditions, a meaningful monitoring evaluation and an evaluation of moderators.	Efficacy of interventions aimed at diagnosed samples: - Psychotherapy vs. control (both active and passive). (N= 16; WLS = 0.35; z = 3,39; $p < .01$).

Zhou et al. (2020)	21 RCTs were classified as high risk of bias, while the remaining 6 presented an unclear risk of bias.	a) IPT was shown to be superior to all psychological controls (psychological placebo, treatment as usual and wait-list condition) in the treatment of infantile-juvenile depression when post-treatment outcomes were analysed. b) Statistically significant decrease in depressive symptoms was identified in children and adolescents who had been treated with CBT, FT, PST and SupT compared to the group who in wait-list condition during post-treatment. c) No evidence was found in favour of BT and NT when compared with any control group.	Efficacy: - IPT vs. psychological PL (SMD = -0.70; 95% CI: -1.29 to -0.12). - IPT vs. TAU (SMD = -0.66; 95% CI: -1.22 to -0.09). - IPT vs. WL condition (SMD = -1.37; 95% CI: -2.04 to -0.70). - CBT vs. WL condition (SMD = -0.94; 95% CI: -1.40 to -0.48). - FT vs. WL condition (SMD = -1.03; 95% CI: -1.66 to -0.40). - PST vs. WL condition (SMD = -1.26; 95% CI: -2.48 to -0.03). - SupT vs. WL condition (SMD = -0.89; 95% CI: -1.78 to -0.01). - BT vs. control. (SMD = 0.16; 95% CI: -1.87 to 2.08). - PDNT vs. control (SMD = 0.01; 95% CI: -1.42 to 0.94).

Note: BT= Behaviour Therapy; CI= Confidence Interval; CBT= Cognitive-Behavioural Therapy; CBTc= computerised Cognitive-Behavioural Therapy; DSM= Diagnostic and Statistical Manual of Mental Disorders; ES= Effect Size; FT= Family Therapy; IPT= Interpersonal Therapy; m= mean; N= number of studies; NDST= Non-Directive Supportive Therapy; PDNT= Psychodynamic Therapy; PST= Problem-Solving Therapy; TPL= Placebo; RCT= Randomized Controlled Trials; SD= Standard Deviation; SMD= Standardized Mean Difference, SupT= Supportive Therapy; TAU= Treatment As Usual; WL= Wait-list Condition; WLS= Weighted Least Squares.

Table 3. Methodological Quality and Risk of Bias of the Studies Included in this Umbrella Review.

	AMSTAR-2 Items																
Study	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	Quality rating
Cuijpers et al. (2020)	+	-	+	+/-	+	+	-	+/-	+	-	+	+	+	+	+	+	Critically Low
Cuijpers et al. (2021)	+	+	+	+/-	+	+	-	+/-	+	-	+	+	+	+	+	+	Low
Forti-Buratti et al. (2016)	+	-	-	+	+	+	+	+	+	-	+	-	+	+	+	+	Low
Klein et al. (2007)	+	-	+	+/-	+	+	-	+	+	-	+	+	+	-	-	+	Critically Low
Méndez et al. (2021)	+	-	+	+	+	+	+	+	-	-	NM	NM	-	-	NM	+	Critically Low
Pu et al. -2017	+	-	-	+/-	+	+	+	+	+	-	+	+	+	-	+	+	Low
Weisz et al. -2006	+	-	+	+	-	+	-	+	-	-	+	-	+	+	-	-	Critically Low
Zhou et al. (2020)	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	Low

Note: Yes: +; Partial yes: +/-; No: -. NM: Not meta-analysis.

Discussion

This systematic review has synthesized the results of the systematic reviews and meta-analysis published in the last two decades about the effectiveness of psychological interventions for the treatment of depression in childhood and adolescence in order to answer some questions posed by the research.

Systematic reviews of published studies have shown that psychotherapy has generally been proved to be superior to the control group in post-treatment and follow-up evaluations, and showing a generalisation of the results, having a positive impact on other disorders such as anxiety (Weisz et al., 2006). This is consistent with the position taken

by different governmental entities, such as NICE (2019), which recommends psychotherapy as the first-line treatment for children and adolescents with depression, due to its safety and high acceptability.

Regarding specific interventions, there is consensus in the meta-analyses included in the present review of reviews about the efficacy of IPT in reducing levels of depression in adolescents, having positive effects on the quality of life and functioning of young people (Pu et al., 2017; Zhou et al., 2020), so it can be considered one of the main psychotherapies for the treatment of depression in this population. More specifically, it can be considered a *well-established treatment* for adolescent depression in an individual format and an *experimental treatment* in group format according to the criteria of the *Journal of Clinical Child and Adolescent Psychology* (Méndez et al., 2021). This coincides with the *umbrella* proposed by Correll et al. (2021), which recommends IPT as the main psychosocial intervention in juvenile depression.

Regarding CBT, despite the discrepancies found in the meta-analysis of Zhou et al. (2020), it can be said that the empirical evidence found in the meta-analysis analysed in this review is sufficient to verify and confirm the efficacy of CBT in the treatment of young people with depression (Klein et al., 2007), being a *well-established treatment* for adolescent depression in individual modality and *possibly efficacious* when applied in group (Méndez et al., 2021), as demonstrated by the review of reviews of Crowe and McKay (2017). However, no evidence was found in favour of computerised CBT, which differs from the results found in the *umbrella* of Domhardt et al. (2018), who found significant effects in favor of computerised CBT in the treatment of depression in children and adolescents. This difference may be due to the fact that Domhardt et al. (2018) included in their review samples with depressive symptoms mainly, so a diagnosis was not required.

In relation to the effectiveness of other types of psychotherapy, family therapy could be considered a *possibly efficacious* treatment in adolescents (Méndez et al., 2021), while the reviews analysed suggest that psychodynamic therapy, supportive therapy, behavioural therapy, problem-solving therapy, and bibliotherapy-based CBT are in the *experimental phase* at this time (Forti-Buratti et al., 2016; Méndez et al., 2021; Zhou et al., 2020).

An analysis of the progress made in the last two decades in the investigation of psychological treatments for depression in children and adolescents reveals an increase in publications, especially in the last 5 years, which are characterized by following a more rigorous methodology, with special emphasis on published RCTs, which have allowed to address depression in children and adolescents from different perspectives and obtain more accurate data on the effectiveness of psychotherapy.

However, critical analysis of the existing evidence allows to identify a significant difference with respect to effect sizes, since, while it is true that psychotherapies intended for children and adolescents with a diagnosis of depression have shown medium effect sizes, confidence intervals have become narrower (Klein et al., 2007) and effect sizes are noticeably more modest than those reported in previous meta-analyses and for other conditions (Weisz et al., 2006) and significantly smaller than those found in adults, which indicates that treatments may not be as effective for this population as for other age cohorts (Cuijpers et al., 2020).

It should also be noted that the research has focused on the study of the efficacy of treatments aimed at samples that included both clinical population with a diagnosis of a depressive disorder, and non-clinical population, where participants presented symptomatology with varying degrees of severity, making it difficult to analyse data independently in order to draw firm conclusions regarding the ideal treatment for the clinical population.

All this indicates that, although much has been achieved in the last 20 years of research on the treatment of depression during the childhood and adolescence, there is a need for a greater proliferation of research in this field, ensuring the quality of studies, using representative samples.

Limitations and future directions

Despite the findings of this work, it is important to emphasize the limitations of the present systematic review of systematic reviews in order to guide future research. First, although this *umbrella review* also synthesized relevant aspects of the characteristics of the interventions, such as the duration of treatment, the analyses were carried out without considering these variables and moderators since insufficient information was available due to the heterogeneity of the studies; therefore, it is advisable that future reviews examine how the different characteristics of the therapy may influence its effectiveness.

With regard to the inclusion criteria, it is important to note that restrictions were placed on the English and Spanish languages for practical reasons, so it is possible that some revisions about the subject have been omitted. Another limitation is the possible overlap of studies, since the selected meta-analyses, in some cases, included the same trials, so those studies were considered more than once in the analysis, which could have biased some results, being an issue to consider in future *umbrella*. Similarly, another important limitation of this work is the low methodological quality of the included reviews, according to the ratings of AMSTAR-2 (Shea et al., 2017), which weakens the evidence reported in this systematic review of reviews.

Finally, it should be noted that, although most of the reviews included mixed samples (n=6; 75%), in the meta-analysis carried out by Forti-Buratti et al. (2016), where the efficacy of treatments for childhood depression was evaluated (children up to 12 years old), no solid conclusions could be drawn due to the lack of studies investigating depression in this age group and the small size of the samples used, so it cannot be confirmed that the findings found in the present review of reviews can be generalized to the child population, due to the influence that the presence of a greater number of adolescents in the analysed samples may have.

It is, therefore, advisable to carry out new systematic reviews and higher quality meta-analyses to improve the level of evidence of psychological interventions for the treatment of children and adolescents with a diagnosis of a depressive disorder, as well as increased research in this field leading to the development of RCTs in children. In addition, new studies that contrast evidence of other types of psychotherapy, such as family therapy or problem-solving therapy, would also be desirable due to conflicting and inconsistent results.

Conclusion

From the present systematic review of systematic reviews and meta-analyses, it can be concluded that, in general, psychological interventions for infant-juvenile depression appear to produce effects that are significant but modest in their strength, breadth and durability. More specifically, the *umbrella* highlights the effectiveness of interpersonal therapy in the treatment of adolescent depression, followed by CBT, showing very positive results in reducing levels of depression, so they can be considered the main treatment alternatives. Despite the efficacy of these psychotherapies, these data cannot be generalized

to the infant population (children <12 years old) due to the lack of representative samples and studies of depression in this age group. Although there are many studies that analyses the efficacy of treatments for depressive disorders, it is identified a clear lack of research of this population that makes it difficult to establish firm conclusions. Additional studies are suggested in an attempt to address this problem and evaluate new forms of treatment.

Declaration of conflict of interest

The authors declare no conflicts of interest.

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*References marked with an asterisk refer to reviews and meta-analyses included in this review.

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