

1 **Psychological interventions for children with emotional and behavioural**
2 **difficulties aged 5-12 years: An evidence review**

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25 **Abstract**

26 In low- and middle-income countries (LMICs) children and families face a multitude of
27 risk factors for mental health and wellbeing. These risks are even further exacerbated in

28 humanitarian emergencies. However, access to effective mental health services is severely

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1 limited, leading to a large mental health treatment gap. Middle childhood (5 to 12 years) is a
2 crucial period for human development during which symptoms of emotional distress often
3 emerge, with one in three mental disorders developing prior to age 14. However, there is little
4 evidence of effective psychological interventions for children in this developmental stage, and
5 suitable for implementation within LMICs and humanitarian emergencies. We conducted this
6 evidence review to inform the development of a new intervention package based on existing best
7 practice for this age group, drawing insights from both global and LMIC resources. Our review
8 synthesizes the findings of 52 intervention studies from LMICs and humanitarian settings; 53
9 existing systematic reviews and meta-analyses covering LMICs and high income countries
10 (HIC), and 15 technical guidelines. Overall, there is limited high quality evidence from which to
11 draw for this age group, however some promising intervention approaches were identified for
12 children experiencing externalizing and internalizing symptoms, traumatic stress, and a
13 combination of difficulties. Several effective interventions utilise cognitive-behavioural
14 techniques for children, in either group or individual format, and incorporate caregiver skills
15 training into treatment, though findings are mixed. Most evaluated interventions use specialists
16 as delivery agents, and consist of several sessions, which poses challenges for scale-up in
17 settings where financial and human resources are scarce. These findings will inform the
18 development of new psychological interventions for children in this age group with emotional
19 and behavioural difficulties.

20 **Key words:** Child and adolescent, mental health, psychological interventions, low and middle
21 income countries, literature review

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Impact statement

1 This review synthesises the current evidence-base for psychological interventions for children 5-
2 12 years old and their caregivers, to inform the design of effective, feasible, and scalable services
3 for children of this age group and their caregivers in low and middle income countries,
4 humanitarian settings, and other contexts of adversity globally. Findings align with previous
5 reviews demonstrating the limited evidence for interventions with younger children, but extend
6 on these by outlining current knowledge in regards to format and content of interventions that
7 have shown promise. It is relevant to researchers and practitioners working to reduce the mental
8 health treatment gap in this neglected age group.

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Social Media Summary

11 This review summarises evidence for interventions to address emotional and behavioural
12 difficulties in children aged 5 to 12 years.

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Introduction

Middle childhood is characterised by important social, emotional, and cognitive changes with wide-ranging long-term consequences for human development. Children in this age group experience significant changes in executive functioning including attentional control, working memory, inhibition, information processing, goal-setting and emotional regulation (Del Giudice 2018). Development of these social, emotional and cognitive skills aids interpersonal interaction and provides a foundation for healthy relationships, school performance, productivity at work, and better overall health and wellbeing (Del Giudice 2018). Middle childhood is also a period of growing independence, and the establishment and maintenance of peer and other external relationships (Nuru-Jeter et al. 2010). Caregiving factors, such as closeness of relationship, are major influences on child mental health at this time (O'Connor et al. 2014), yet this is also the time when a child's environment expands to outside the home, and relationships within school and other community settings become increasingly important (Sørli et al. 2021). It is well established that exposure to risk and protective factors during this period influences mental health and developmental trajectories into adolescence and adulthood (Feinstein and Binner 2004), yet unfortunately globally over 356 million children live in poverty (Silwal et al. 2020), and more than 43 million are forcibly displaced due to armed conflict and other humanitarian emergencies (UNHCR 2023), risking disruption of their development.

Often, emotional and behavioural difficulties emerge or are first identified during the middle childhood period, including both internalising and externalising problems. Approximately one in three mental disorders (including depression, anxiety, and behavioural disorders) have their onset before 14 years of age (Solmi et al. 2022), and more than 250 million children and adolescents worldwide experience mental health disorders (Stelmach et al. 2022). Children and

1 young people living in contexts of adversity face significantly greater risks of mental health
2 difficulties (Blackmore et al. 2020; Charlson et al. 2019).

3 Despite the high burden of mental disorders, and the demonstrated return on investment
4 of timely treatment (Stelmach et al. 2022; UNICEF 2023), there remains a vast global mental
5 health treatment gap, with the majority of people needing treatment not receiving minimally
6 adequate care. This gap is estimated at up to 90% in low-income countries, with children and
7 adolescents particularly neglected in treatment (WHO 2022). Major drivers of this treatment gap
8 include lack of funding, particularly for child and adolescent mental health, (Lu et al. 2018), and
9 under resourced professional workforces, with an average of 2 mental health professionals per
10 100,000 population in low-income countries (compared to 60 in high income countries) (WHO
11 2021). Other factors include barriers such as lack of parental knowledge and understanding of
12 mental health problems and support, high costs and low accessibility of services, lack of trust in
13 services, and limited health worker training in identifying and managing child mental problems
14 (O'Brien et al. 2016; Reardon et al. 2017). Efforts to address this gap include integrating mental
15 health strategies across sectors, community-based service delivery, and task-shifting approaches
16 which involve training non-specialists to deliver psychological support with supervision,
17 allowing specialists to focus on complex cases.

18 There is increasing evidence for the safety and effectiveness of such non-specialist
19 delivered interventions in a variety of settings, provided systematic adaptations are made for
20 cultural and contextual factors (Singla et al. 2017; van Ginneken et al. 2021). Recently
21 developed intervention packages include the World Health Organization's Problem
22 Management+ (Dawson et al. 2015) for adults experiencing distress, and Early Adolescent Skills
23 for Emotion (EASE) for 10-to-15 year-olds with internalising symptoms (Dawson et al. 2019),

1 which have both shown feasibility and effectiveness in multiple low and middle income (LMIC)
2 settings. They are transdiagnostic via targeting broadly defined psychological distress rather than
3 requiring complex assessment and diagnostic procedures, incorporate evidence-based treatment
4 components, and are relatively brief. However, corresponding interventions for boys and girls
5 aged 5-12 in LMICs and humanitarian emergencies remain lacking.

6 Multiple guidelines recommend identification and referral to psychological interventions
7 for children with emotional and behavioural symptoms (e.g. UNICEF 2021; WHO 2016), yet the
8 development of feasible evidence-based non-specialist interventions that can be delivered at
9 scale is hampered by a lack of evidence. Recent meta-analyses and umbrella reviews have found
10 limited evidence of effective approaches for children in LMICs (Barbui et al. 2020) and refugee
11 and asylum seeking populations (Turrini et al. 2019) with even less evidence for the middle
12 childhood age range (Purgato et al. 2018). An evidence and gap map (Yu et al. 2023)
13 underscored the scarcity of evidence for pre-adolescent years, and highlighted the tendency to
14 focus on clinical outcomes rather than broader distress and wellbeing conceptualizations. Despite
15 potential promise of parenting and family-based interventions in LMICs (Pedersen et al. 2019),
16 most evaluated programmes tend to focus more on universally-delivered prevention and
17 promotion, with few targeting children with existing behavioural and emotional difficulties, or
18 families in humanitarian emergencies. Gender differences in response to interventions are
19 currently poorly understood. Accordingly, interventions for children and adolescents, including
20 knowledge of active ingredients and key implementation factors, are recognized as research
21 priorities for mental health in humanitarian settings (Tol et al. 2023).

22 In order to design optimal psychological interventions, there is a need to understand and
23 evaluate elements driving impact. Brown and colleagues (2017) conducted a systematic review

1 and treatment component analysis of interventions for young people in LMICs affected by armed
2 conflict. Common treatment components in promising interventions included accessibility
3 promotion, building rapport, homework provision, and strategies for maintaining gains and
4 preventing relapse. Specific intervention strategies included psychoeducation, cognitive,
5 exposure, relaxation, and expressive techniques like art and dance. Similarly, systematic reviews
6 and treatment component analyses of parenting and family interventions in LMICs (Bosqui et al.
7 under review; Pedersen et al. 2019) identified commonly included factors of psychoeducation,
8 supporting caregiver coping, teaching caregiver strategies (e.g., praise, reinforcement, logical
9 consequences, modeling), promoting social support, building insight, activity scheduling,
10 communication skills, problem solving, and goal setting. A recent series of reviews
11 commissioned by the Wellcome Trust, for preventing and treating depression and anxiety in 14-
12 24 year-olds (Wolpert et al. 2021) found that potentially promising treatment components include
13 behavioral activation, problem-solving, relaxation techniques like mindfulness, emotion
14 regulation, and the use of economic supports to promote mental health. Important
15 implementation factors highlighted included considering group teaching, booster sessions, and
16 the capacity of teachers to implement strategies effectively in schools. Unfortunately, the
17 majority of reviews highlight limited quality evidence. Additionally, the extent to which these
18 components have the same feasibility and impact with younger children remains unknown.

19 Building and expanding on these reviews, we conducted this evidence review to
20 synthesise existing research and practice from both high income countries (HICs) and LMICs on
21 psychological interventions specifically for children aged 5–12 experiencing emotional and/or
22 behavioural problems, with particular attention to effective components and implementation
23 strategies. We conducted this study to inform the development of a new, evidence-based, scalable

1 intervention designed for delivery by trained and supported non-specialist providers, for boys
2 and girls experiencing symptoms of emotional and behavioural difficulties, living in LMICs,
3 humanitarian emergencies, and other contexts of adversity.

4 **Methods**

5 **Design**

6 We conducted an evidence review of intervention evaluations for boys and girls aged 5-
7 12 with emotional and/or behavioural problems living in LMICs specifically, including studies
8 conducted in humanitarian emergencies in LMICs (**Strategy 1**). Recognising that the evidence-
9 base for psychological interventions in LMICs is limited, this review was supplemented by
10 additional evidence from two sources: i) A review and synthesis of findings from existing
11 systematic reviews and meta-analyses on interventions for emotional and/or behavioural
12 disorders for this age group globally (**Strategy 2**); ii) A review of current technical guidelines for
13 emotional and behavioural disorders in this age group (**Strategy 3**). This is not a systematic
14 review, but rather draws from existing available synthesised and non-synthesised evidence for
15 psychological interventions with this age group from a range of sources, to inform
16 recommendations for the design of new interventions.

17 **Search Strategies and Selection Criteria**

18 The searches Strategy 1 and 2 were conducted by FB, CL and SS with regular discussion
19 to compare results and discuss inclusion and exclusion. Studies were initially screened for
20 inclusion by FB, CL and SS on the basis of title, abstract, and/or information presented in the
21 abstract. In the second stage of screening, studies were screened for inclusion again by FB, CL
22 and SS on the basis of full text, with regular discussions to ensure consistency of inclusion.
23 Strategy 3 searches were conducted by FB and CL separately and included review of current

1 guidelines relevant for 5-12 year-olds. Table 1 outlines full details of the inclusion and exclusion
2 criteria.

3 ***Search and Synthesis Strategy 1- LMIC Studies***

4 To identify eligible studies, we reviewed reference lists of 24 systematic reviews, three
5 Cochrane reviews, one unpublished evidence review, one umbrella review, and one Evidence
6 Gap Map (see Supplementary Materials 1 for reviews searched). We screened for evaluation
7 studies that tested a psychological intervention for children aged 5-to-12 years experiencing
8 emotional or behavioural difficulties, compared to a control group. Systematic reviews were
9 identified through: i) Unstructured data base searches, ii) Searching reference lists of reviews of
10 reviews and recent publications, and iii) Consultation with authors and colleagues. Additionally,
11 we reached out to relevant authors to enquire about upcoming publications that could be
12 included. Data was extracted and synthesized in narrative format. Expanded information is
13 provided for studies that met the following criteria: sample size $n > 50$; RCT design; sufficient
14 information on intervention, format, and study design to inform future interventions (judged by
15 two reviewers); and significant improvement in treatment group compared to control for at least
16 one relevant outcome.

17 ***Search and Synthesis Strategy 2- Global Reviews***

18 We searched three sources to identify appropriate systematic reviews and meta-analyses.
19 First, we searched Cochrane library to identify the most recent reviews on interventions for
20 children (no time restrictions). Second, we used systematic search results from two recent
21 internal WHO evidence reviews conducted in 2022. Full search strategies are available in
22 Supplementary Material 2. Studies were initially screened for inclusion based on title, abstract,
23 and/or information presented in the abstract. In the second stage of screening, studies were

1 screened for inclusion based on full text, with regular discussions to ensure consistency. Data
2 was extracted and synthesized in narrative format.

3 ***Search and Synthesis Strategy 3- Technical Guidelines***

4 We conducted an internet search for mental health and psychosocial support technical
5 guidelines relevant for children, along with input from all authors. This was limited to global- or
6 national-level guidelines in English. No date restrictions were applied. They were narratively
7 summarised individually, and then synthesised to provide key recommendations for each type of
8 presentation. Where guidance on pharmacotherapy was included, this was not synthesised for our
9 review.

10 **Results**

11 **Identified Studies**

12 Search strategy 1 identified 52 manuscripts from 49 unique intervention studies from
13 LMICs (Figure 1). Details of the studies are outlined in Table 2. Search strategy 2 resulted in
14 synthesis of 53 reviews from the global literature: 5 Cochrane reviews (2 on interventions for
15 internalising symptoms, 2 for both internalising and externalising and 1 for trauma), 18
16 additional systematic reviews and meta-analyses on interventions for internalizing symptoms, 15
17 on interventions for externalizing symptoms, 7 on post-traumatic stress, and 9 reviews on
18 interventions targeting multiple outcomes or with transdiagnostic benefits (see Supplementary
19 Material 3 for an overview of studies included). Search strategy 3 identified 15 guidelines (see
20 Supplementary Material 4), though many of these highlighted weak evidence or
21 recommendations for specific interventions with children and adolescents, and ages 5-12 in
22 particular.

1 Findings are synthesised according to categories of presenting emotional or behavioural
2 difficulties below, and key findings are summarised in Box 1. Beyond specific evidence for these
3 presentations, several guidelines provided general recommendations to pay attention to
4 implementation considerations including: adaptation of interventions for age/language, cultural
5 responsiveness, partnerships with other providers/sectors, training and supervision, and
6 responding to the needs of caregivers in addition to responding to caregiver mental health
7 problems when indicated.

8 **Interventions for Internalising Symptoms**

9 *Evidence from LMIC Studies*

10 Fifteen unique studies (nine RCTs and six quasi-experimental [QEs]) examined
11 effectiveness of interventions for internalizing symptoms. The studies varied in greatly in size
12 and only two were conducted in conflict-affected settings (Jordan and Lebanon). The remaining
13 13 studies were conducted in LMICs, with 3 targeting children exposed to specific adversities:
14 living in residential care institutions, child labour, exposed to child abuse. All studies required a
15 diagnosis or a clinical score on a standardised measure, with many outreaching children in
16 specialist services, and some doing broader screening including in schools. Five studies included
17 children aged six and younger, one included children aged 7-9 years, and the remainder had age
18 ranges between 8 and 14 years; one included only girls. Only two specified delivery by non-
19 specialists, and most used a group format with 6 to 16 sessions. Eight included children only (six
20 group; two format not reported), three included parents and children (two group, one individual),
21 and four worked with mothers only (two group, one combination, one format not reported).

22 Specific interventions included: variants of cognitive behavioural therapy (CBT) for
23 children ($n = 7$), teaching mothers to implement CBT techniques or emotional coaching with

1 their children ($n=2$); social skills training ($n=1$); parenting interventions ($n=1$); quality of life
2 therapy ($n=1$); physical activity only ($n=1$); play therapy ($n=2$).

3 Thirteen of these studies reported a significant improvement in the treatment group
4 versus the control on at least one child-focused outcome, however, for two studies this was only
5 for specific sub-scales of measures. Of the 15 interventions, six showed promising effects and
6 further information was extracted and presented below.

7 Two studies examined the EASE intervention among Syrian refugee adolescents in
8 Jordan ($n=471$) (Bryant et al. 2022), and Lebanon ($n = 198$) (Jordans et al. 2023). The
9 intervention consisted of seven 90-minute group sessions for adolescents and three sessions for
10 caregivers, delivered by non-specialist providers provided with brief training and regular
11 supervision. Content for adolescents included identifying emotions, relaxation, behavioural
12 activation, and problem solving, while caregivers discussed how to support their adolescent, self-
13 care, and positive parenting strategies. In Jordan, the intervention improved internalizing
14 symptoms for adolescents and reduced psychological distress and inconsistent parenting for
15 caregivers at a three-month follow-up. No significant effects were found on other measures. In
16 Lebanon, the trial was ended prematurely due to ongoing adversity and the COVID-19
17 pandemic, but findings showed equivalent changes in treatment and control groups.

18 Two other studies evaluated group-based specialist CBT interventions. In Mauritius,
19 Ramdhonee-Dowlot and colleagues (2021) evaluated Super Skills for Life for 9-14 year-olds in
20 residential care ($n=100$), finding significant improvements in anxiety, depression, conduct
21 problems, hyperactivity and inhibitory control, and emotion regulation, at both post-intervention
22 and a three-month follow-up. In Nigeria ($n=178$), a group-based CBT play therapy reduced

1 social anxiety and general anxiety in children aged 6-12 with stutters at post-intervention and
2 four months later (Obiweluzo et al. 2021).

3 Two studies targeted child outcomes via parents. In Turkey ($n=55$), the group-based
4 Triple P program significantly reduced psychological and anxiety symptoms and improved
5 functioning for 8-12 year-olds with anxiety disorders at post-intervention and four-months after
6 the intervention (Ozyurt et al. 2019). Edrissi and colleagues (2019) conducted an RCT of the six
7 group-session Tuning into Kids intervention with 56 mothers of children aged four to six in Iran,
8 focused on teaching emotion coaching to mothers. Child anxiety significantly reduced in the
9 intervention group compared to the control group and was maintained after six months.

10 *Evidence from Global Reviews*

11 Several reviews reported on the benefit of CBT for childhood anxiety, with small to
12 moderate effect sizes. James and colleagues (2020) conducted a Cochrane review of 87 studies
13 trialing CBT for anxiety disorders with 5964 children. Findings showed that CBT had a higher
14 remission rate for anxiety diagnoses compared to waitlist or no treatment controls. However,
15 there was limited evidence when comparing CBT to active controls or other treatments. The
16 review was not able to determine differences between CBT and medication, or CBT combined
17 with medication due to a lack of relevant studies, nor the long-term effects of CBT, due to
18 insufficient studies. Outcomes did not vary based on duration of treatment. Group-based
19 interventions had stronger symptom outcomes reported by parents and children, but potential
20 confounding factors were noted. The review also highlighted age-related measurement issues as
21 a source of variation in outcomes across different age groups.

22 Strawn and colleagues (2021) provide an overview of more than 20 RCTs showing the
23 benefit of CBT and outline that the approach has limited negative side effects. Luo and McAloon

1 (2021) report similar findings, concluding that CBT moderately reduces anxiety symptoms.
2 Wergeland and colleagues (2021) note that CBT is effective in reducing internalizing disorders
3 and symptoms for children and adolescents, and the outcomes are comparable with older
4 populations. Generally, children experiencing higher scores at baseline experienced higher rates
5 of change (Wergeland et al. 2021). Similar benefits were found for digitally delivered
6 programmes (Strawn et al. 2021). One review found that school-based programmes appear to
7 reduce anxiety symptoms in this age group but evidence is weak (Caldwell et al. 2019). A further
8 review found that very small benefits for anxiety symptoms were maintained until 12 months in
9 school-based programmes (Hugh-Jones et al. 2021).

10 CBT-based interventions for childhood anxiety typically include psychoeducation,
11 relaxation techniques, cognitive restructuring, and exposure tasks (Strawn et al. 2021). Specific
12 therapeutic processes within CBT have been identified as driving program effectiveness.
13 Individual-, group-, and family-based CBT have shown more benefits compared to control
14 conditions (Sigurvinsdottir et al. 2020). Brief interventions involving social skills training and
15 parent training have been effective in reducing anxiety (Stoll et al. 2020). In-session exposure
16 tasks have been found to improve anxiety levels, while relaxation techniques have shown less
17 impact (Whiteside et al. 2020). Group psychoeducation has also demonstrated reductions in
18 anxiety symptoms, although interventions vary widely (Baourda et al. 2021). Mindfulness-based
19 interventions have shown a small to moderate effect on anxiety but lack sustained outcomes
20 (Odgers et al. 2020).

21 Parent-only CBT was effective in reducing anxiety, comparable to programs involving
22 both children and parents. Parent-directed CBT may be more suitable for younger children, but
23 dropout rates tend to be higher in parent-only programs (Yin et al. 2021). Other reviews have

1 shown that parental involvement is not necessarily beneficial in the treatment of anxiety
2 (Cordier et al. 2021; Peris et al. 2021; Wergeland et al. 2021).

3 In contrast, there is limited evidence supporting the effectiveness of interventions for
4 depression in young children (Cuijpers, Karyotaki, et al. 2021; Cuijpers, Pineda, et al. 2021;
5 Liang et al. 2021). In a Cochrane review, the use of CBT, third-wave CBT, and interpersonal
6 therapy in preventing depression in children and adolescents was examined (Hetrick et al. 2016).
7 The review included 83 trials, with 53 involving targeted or indicated populations. Findings
8 indicated a small positive effect on depression diagnosis, depression symptoms, general and
9 social functioning, with evidence deemed of low to moderate quality.

10 Interventions for subthreshold depression have shown little effectiveness (Cuijpers,
11 Pineda, et al. 2021). Only a small proportion of young people respond to current depression
12 therapy models (Cuijpers, Karyotaki, et al. 2021). School-based programs have not demonstrated
13 evidence for reducing depression symptoms (Caldwell et al. 2019). Network meta-analyses have
14 shown that interpersonal psychotherapy and in-person CBT have better effects than control
15 conditions, but the age range covered extends into adolescence (Liang et al. 2021). Resilience-
16 oriented programs focusing on cognitive, problem-solving, and social skills resulted in
17 improvements in depression symptoms in both targeted and universally delivered programmes,
18 which was maintained in the medium term (Ma et al. 2020).

19 ***Technical Guidelines***

20 Technical guidelines reviewed generally underscored the lack of quality evidence for this
21 age group, yet largely recommended group- or individual-based CBT for anxiety and depression
22 with recommendations of family-therapy components to provide adjunctive benefits, in

1 particular for more severe presentations (Walter et al. 2020, 2023; National Institute for Health
2 Care and Clinical Excellence, 2019).

3 **Interventions for Externalising Symptoms**

4 *Evidence from LMIC Studies*

5 Seventeen studies, including sixteen RCTs and one quasi-experimental study with
6 varying sample sizes, examined interventions for externalizing problems such as attention-deficit
7 hyperactivity disorder (ADHD) symptoms, aggression, oppositional defiant behaviour, conduct
8 problems, and antisocial behaviour. All studies required children to have a diagnosis, or score
9 above a cut-off on a structured screening tool, and most studies included children referred to
10 specialist clinics. Two studies were conducted in Romania in 2019 when it was classified as a
11 middle-income country, while the rest were in LMICs, with only one working with conflict-
12 affected orphans with behavioural difficulties in Uganda. Seven studies included children with
13 behavioural difficulties broadly, while ten studies specifically focused on children with an
14 ADHD diagnosis or clinical level of symptoms. Six studies included young children 6 years and
15 younger, seven included children between 7 and 14 years, and two included only 10- to 12-year-
16 olds (two did not report age). Four studies only included boys. Eight interventions were
17 conducted in schools, while seven were conducted in clinics (two did not report location).

18 Therapeutic approaches varied, including mindfulness/meditation ($n=2$), parent skills
19 training ($n=8$), teacher training ($n=1$), touch therapy ($n=1$), play ($n=1$), cognitive exercises ($n=2$),
20 problem solving ($n=2$) and cognitive behavioural ($n=4$). The length of each intervention varied
21 greatly and ranged from a single session with two follow-up calls, to weekly sessions for one
22 year. Within this range, most interventions were run between three and ten weeks. Interventions
23 involved children only ($n=5$), child-caregiver dyads ($n=5$), and caregivers only ($n=7$). The

1 majority ($n=12$) delivered content in group or a combination of group and individual sessions.

2 None reported delivery by non-specialists.

3 Thirteen studies reported on a significant improvement in the treatment group on at least
4 one outcome; five of these had sufficient detail and sample size to explore further. Only one
5 study evaluated a child-focused programme. Ojiambo (2013) observed significant improvements
6 in externalizing problems for displaced orphans aged 10-12 years living in Uganda and
7 participating in Group Activity Play Therapy compared to a control group, with positive effects
8 also seen for internalizing symptoms.

9 Two studies tested parenting interventions for parents of children with ADHD. Behbahani
10 and colleagues (2018) evaluated a mindful parenting group intervention with a sample of 56
11 parents of children aged 7-12 in Iran. They found significant improvements in child symptoms,
12 as well as parent distress and parent-child interactions. Malik and colleagues (2017) trialed an
13 adapted version of the Defiant Child intervention with 85 parents of children aged 4-12 in
14 Pakistan, consisting of both group and individual sessions. They found significant treatment
15 effects for several indicators of disruptive behaviour in the home, but not school.

16 Two studies tested parent skills training for parents of children with externalizing
17 behavioural difficulties. David and colleagues (2014) conducted a trial of a 10-session enhanced
18 Rational Positive Parenting intervention (delivered by specialist school counselors) including
19 behavioural parenting strategies plus caregiver emotion regulation strategies with 106 caregivers
20 in Romania. They found significantly reduced child externalizing behavior problems in both the
21 standard behavioural parenting programme and the enhanced programme, compared to waitlist.
22 In a sample of 106 parents in Panama, Mejia and colleagues (2015) found that a single session

1 Triple P discussion group on the topic of disobedience led to significant improvements in
2 problematic behaviors in children, sustained through six-months follow-up.

3 *Evidence from Global Reviews*

4 Several reviews find that parenting support programs effectively reduce child behavior
5 problems (Leijten, Gardner, Melendez-Torres, Van Aar, et al. 2019; McAloon and de la Poer
6 Beresford 2021; O'Connor and Hayes 2018; Parker et al. 2021; Retuerto et al. 2020; Riise et al.
7 2021; Thongseiratch et al. 2020; Valero Aguayo et al. 2021). These programs are often based on
8 behavior management skills rooted in Operant Learning Theory and Social Learning Theory
9 (Leijten, Gardner, Melendez-Torres, Van Aar, et al. 2019; Patterson, 1982). Some effective
10 programmes primarily focus on teaching techniques to promote positive reinforcement (e.g.,
11 reward or praise), whereas others programmes include techniques on non-violent discipline
12 (Leijten, Gardner, Melendez-Torres, Van Aar, et al. 2019). A meta-analysis was conducted to test
13 the “golden couple” (a hypothesis that suggests combining relationship enhancement and
14 behavior management is beneficial for treating behavioral issues) included 156 studies and
15 assessed if parenting programmes that included relationship enhancement in addition to
16 behaviour management are more effective in reducing disruptive child behaviour than
17 programmes that included only one component (Leijten, Gardner, Melendez-Torres, et al. 2018).
18 Authors found that the “golden couple” was more beneficial for use in treatment programmes but
19 not preventive programmes.

20 A network meta-analysis identified four active parenting program types (behaviour
21 management, behaviour management with parental self-management, behaviour management
22 with psychoeducation, and relationship enhancement), with focused interventions on behavior
23 management alone showing the highest effectiveness (Leijten et al. 2022). They conclude that

1 there is a need for more targeted or tailored programmes, or programmes whose components are
2 flexible and adaptable to the target population (Leijten, Melendez-Torres, et al. 2018). The
3 "Incredible Years" parenting programme (Gardner et al. 2019; Leijten, Gardner, Landau, et al.
4 2018; Leijten, Gardner, Melendez-Torres, Weeland, et al. 2019) is an example of an effective
5 manualised intervention that incorporates multiple strategies. It follows a collaborative group-
6 based model that enables parents to identify their own skills and enables them to identify
7 effective strategies to achieve their goals in their own family context. Overall, there is a strong
8 rationale for including more than just behaviour management techniques in parent and family
9 support programmes as it can effectively target multiple family characteristics that can contribute
10 to the prevention of disruptive child behaviour (Leijten, Gardner, Melendez-Torres, Van Aar, et
11 al. 2019). However, there is also evidence that suggests "less is more" in parenting programmes,
12 as it provides parents with the opportunity to focus and master one technique (Leijten, Gardner,
13 Melendez-Torres, Van Aar, et al. 2019).

14 Beyond parenting intervention, two reviews examined moderators of effectiveness in
15 psychosocial programs for children and adolescents with conduct problems. McMahon and
16 colleagues (2021) found that higher baseline symptoms, maternal depression, father engagement,
17 and individual program delivery (compared to group) were associated with larger positive
18 effects. On the other hand, they found no evidence of moderation in either direction for child
19 diagnosis, family risk level, and intervention setting. Baumel and colleagues (2021) similarly
20 found that interventions for children with behavior problems within the clinical range had small
21 to moderate effects (with no significant effect for interventions for children with symptoms
22 below clinical levels) , and individually-delivered programs involving both the parent and child
23 were most effective. Two school-based reviews did not report on factors that might have

1 contributed to the effectiveness of these programmes so little is known about what works in the
2 school setting specifically (O'Connor and Hayes 2018; Retuerto et al. 2020).

3

4 ***Technical Guidelines***

5 The Helping Adolescents Thrive (HAT) guidelines conditionally recommend (based on
6 very low certainty of evidence) that interventions be provided to adolescents with disruptive
7 behaviour, and could include training for parents based on social learning approaches, social-
8 cognitive problem solving and interpersonal skills training for adolescents, and joint caregiver-
9 adolescent session based on social learning model (WHO 2020). WHO's mhGAP Intervention
10 Guide (WHO 2016) recommends providing psychoeducation, parent skills training, caregiver
11 support, engagement with school, strengthening of social supports, and behavioural interventions
12 when available. The National Institute for Health Care and Clinical Excellence guidelines for
13 antisocial and conduct problems in young people recommend group cognitive-behavioural and
14 social problem solving interventions only for children aged 9 and above (National Institute for
15 Health Care and Clinical Excellence 2023). This guidance recommends parent-only or child-and-
16 parent interventions based on social learning models for children aged 3-11 years, and
17 encourages involvement of both caregivers where possible.

18 **Interventions for Traumatic Stress Symptoms**

19 ***Evidence from LMIC Studies***

20 Nine unique studies, including seven RCTs and two quasi-experimental studies of
21 varying sample sizes, examined interventions for traumatic stress outcomes for populations
22 affected by natural disasters ($n=4$), armed conflict and displacement ($n=3$), a bombing ($n=1$) and
23 exposure to other traumatic events ($n=1$). Four studies required a PTSD diagnosis as determined

1 by clinical interview, while five utilized standardised self-report measures. The interventions
2 tested were primarily CBT-based ($n=6$), with other content including critical incident stress
3 management, spiritual hypnosis, and psychodrama. Interventions had varying session lengths and
4 formats ($n=6$ group, $n=3$ individual), and five were conducted in school settings. Screening
5 methods relied on standardized tools, and all but one study included both boys and girls.
6 Interventions focused on children aged 5 to 18 years with two studies including children 6 years
7 and younger. Only three interventions also included caregivers for at least one session.

8 Six out of the nine studies reported significant improvements in the treatment group
9 compared to the control group for at least one outcome, including reductions in PTS symptoms.
10 Two studies showed significant within-group improvements, but no difference between two
11 active treatment conditions: trauma-focused CBT (TF-CBT) versus problem solving (Dawson et
12 al. 2018), and narrative exposure therapy versus meditation-relaxation (Catani et al. 2009). The
13 three promising studies all evaluated interventions based on TF-CBT and found significant
14 improvements in PTS and other outcomes: group-based intervention delivered by specialists in
15 schools for children aged 7-13 following floods in Pakistan (Amin et al. 2020); group-based
16 Teaching Recovery Techniques intervention plus behavioural parenting sessions, delivered by
17 teachers in schools for Syrian refugee children aged 9-12 and their caregivers in Lebanon (El-
18 Khani et al. 2021); and individual non-specialist delivered TF-CBT for trauma-affected children
19 aged 5-18 in Zambia, and their caregivers (Kane et al. 2016; Murray et al. 2015). Both non-
20 specialist interventions relied on brief trainings and regular supervision.

21 *Evidence from Global Reviews*

22 Recently published reviews emphasize the effectiveness of TF-CBT as the recommended
23 treatment for PTSD in children and adolescents (Chipalo 2021; Xiang et al. 2021; Yohannan et

1 al. 2022). Cognitive processing therapy (CPT), behavioural therapy, individual TF-CBT, and
2 group TF-CBT were found to be effective compared to controls, however, there is a limited
3 evidence base and need for further research with different populations. McWey (2022) reviewed
4 interventions for trauma (in children and adolescents) that focused on couple of family- and
5 partner- based relational processes. The author found that so-called systemic interventions
6 reduced posttraumatic stress symptoms in young people. A further review on art therapy for
7 children and adolescents with mental health disorders found two relevant RCTs and authors
8 suggest that this approach may be beneficial for young people with PTSD (Braitto et al. 2022).

9 When examining moderators of treatment effectiveness, Yohannen and colleagues (2022)
10 found that moderators of the effect of CBT treatment included trauma type (children who had
11 experienced physical abuse, single incident or traumatic grief had the best outcomes) and gender
12 (males benefitted more). Danzi and LaGreca (2021) identified age (younger children), maternal
13 depression, and unhelpful beliefs as moderators leading to poorer treatment response. Group-
14 based interventions were less effective than individual ones, and no differences were found based
15 on provider or trauma type. Powell and colleagues (2020) highlighted issues with parenting
16 engagement, including logistical challenges and past experiences with accessing care.

17 ***Technical Guidelines***

18 The American Academy of Child and Adolescent Psychiatry Clinical Practice Parameter
19 (Cohen et al. 2010) recommends that treatment of children with PTS symptoms should include
20 education of the child and parents about PTSD, consultation with school personnel, and trauma-
21 focused psychotherapy including cognitive-behavioral therapy, psychodynamic psychotherapy,
22 and/or family therapy. Parents should be included in treatment where possible. The HAT
23 Guidelines similarly recommend individual trauma-focused CBT for higher trauma exposure

1 (WHO 2020). International Society for Traumatic Stress Studies guidelines (Bisson et al. 2019)
2 recommend trauma-focused CBT (both for caregiver/child dyads and child alone) and Eye
3 Movement Desensitization and Reprocessing for the treatment of children and adolescents with
4 clinically relevant post-traumatic stress symptoms.

5 **Interventions Targeting Multiple Outcomes**

6 *Evidence from LMIC Studies*

7 Eight studies, consisting of seven randomized controlled trials (RCTs) and one quasi-
8 experimental study, examined interventions targeting multiple symptom presentations in conflict-
9 affected settings ($n=5$) and low- and middle-income countries ($n=3$). Interventions typically
10 targeted broad age ranges, but only one worked with children 6 years and younger, and one
11 worked only with boys. All studies utilized standardized screening measures to identify children;
12 often screening took place in schools. The interventions, mostly based on CBT ($n=6$), included
13 group ($n=6$), individual sessions ($n=1$) and combination group/individual ($n=1$), ranging from 2
14 to 20 sessions, with five conducted via schools. One intervention targeted parents only, and one
15 targeted parent-child dyads, while the remainder focused on children only. Six interventions were
16 delivered by non-specialists. All eight studies reported significant improvements in the treatment
17 group compared to the control group, but in some cases, these effects were specific to sub-groups
18 or study sites. All non-specialist interventions utilized brief classroom-based trainings followed
19 by practice and regular supervision.

20 Of the five studies showing promise, four were RCTs of the 15-group-session non-
21 specialist delivered Classroom Based Intervention in different conflict-affected contexts, with
22 mixed results regarding reductions in emotional or behavioral problems. The intervention
23 showed reductions in psychological difficulties and aggression for boys in Nepal but had no

1 effects on PTSD, depression, anxiety, or functioning (Jordans et al. 2010). In Indonesia, there
2 was a reduction in PTSD symptoms for girls (Tol et al. 2008), while in Sri Lanka, the
3 intervention had an effect on conduct problems and PTSD and anxiety symptoms in boys (Tol et
4 al. 2012). In Burundi, no overall effects were found, but there were effects on depression
5 symptoms and functional impairment for children in larger households (Tol et al. 2014).

6 Dorsey and colleagues (2020) tested a 12-week culturally adapted group-based TF-CBT
7 focusing on parental death, with 634 orphaned children aged 7-13 years in Kenya and Tanzania.
8 The intervention consisted of 12 group sessions, plus 3-4 individual sessions, delivered by a lay
9 counsellor trained over 4.5 days and provided with weekly supervision by local supervisors who
10 in turn received weekly master supervision from international study leads. Counsellors showed
11 high level of competence and fidelity. Children were included if they screened positive on a
12 measure of post-traumatic stress, or a measure of prolonged grief. TF-CBT was effective in
13 reducing PTS symptoms in 3 of 4 sites, and this was retained at 12-month follow-up in two sites,
14 with similar patterns for outcomes of prolonged grief, and internalizing symptoms.

15 *Evidence from Global Reviews*

16 Some reviews examine interventions for cross-diagnostic benefits. In the parenting-
17 directed programmes, we found four reviews focused on establishing the impact of programmes
18 for parents of children with disruptive behaviours on internalising problems. Phillips and
19 colleagues (2021) found that PCIT reduced anxiety compared to control condition. A review of
20 the effect of parenting interventions for child disruptive behaviour on internalising symptoms
21 identified twelve studies of the Incredible Years, Triple-P, and Tuning In To Kids reporting on
22 both outcomes. All but one study reported positive impact on externalising behaviours, and over
23 half also reported significant improvement in internalizing symptoms (Zarakoviti et al. 2021).

1 Similarly, one review looked at parenting programmes for conduct disorder and found small
2 post-intervention effects on parent-reported emotional problems, but that these were not
3 sustained. There were no specific individual programme elements that predicted larger
4 improvements, but behaviour management and relationship enhancement together predicted
5 larger effects (Kjøbli et al. 2022). Another review found that Triple P had a positive impact on
6 social competence, emotional and behavioural problems, as well as a range of parenting-related
7 outcomes (Li et al. 2021).

8 Many of the other reviews on interventions that might reduce both internalizing and
9 externalizing interventions did not identify sufficient studies or were inconclusive. One review
10 looked to describe the evidence for the use of modular school-based mental health interventions
11 based on a common-elements approach and was only able to identify programmes for
12 internalizing problems, but not externalizing (Kininger et al. 2018). A review of school-based
13 interventions showed that there was some evidence to suggest that selective prevention for either
14 anxiety or depression was more effective than working across diagnostic categories, but authors
15 were not able to draw firm conclusions (Caldwell et al. 2019). A review of an attachment-based
16 intervention for children with existing symptoms or diagnoses, was not able to establish the
17 effectiveness of the programme, however authors concluded that it may be effective for children
18 with more than one condition (Money et al, 2021). One review that specifically looked at the
19 effects of CBT on PTSD, depression and anxiety in child refugees found that most studies
20 (including but not isolated to RCTs) reported positive results (Lawton and Spencer 2021).
21 However, another review of interventions for refugees to target depression and PTSD was not
22 able to draw conclusions on effectiveness of interventions for refugees under 18 years due to the
23 lack of evidence (Kip et al. 2020).

1 *Technical Guidelines*

2 No guidelines were identified specifically for transdiagnostic interventions designed to
3 address a range of symptoms. However, UNICEF's review of evidence and practice (UNICEF,
4 2020) identifies several promising approaches to reduce general emotional distress and
5 highlights the promise of Common Elements Treatment Approach and the Youth Readiness
6 Intervention– both of which are transdiagnostic, components/common-elements approaches with
7 adaptation of treatment strategies to fit new contexts and problems.

8 **Discussion**

9 In this review we synthesized the findings of 52 intervention studies in LMICs (including
10 humanitarian settings), 53 global systematic reviews and meta-analyses, and 15 technical
11 guidelines to identify the best evidence and practice for addressing emotional and behavioural
12 difficulties in 5-12 year-old children. Overall, there is limited high quality evidence to draw from
13 with this age group, however some promising intervention approaches were identified for
14 children experiencing externalizing and internalizing symptoms, traumatic stress, and a
15 combination of difficulties. Several effective interventions utilise cognitive-behavioural
16 techniques for children, in either group or individual format, and/or target caregiver skills
17 training, though findings are mixed. Most evaluated interventions used specialists as delivery
18 agents, and consist of a large number of sessions, which poses challenges for scale-up. There is
19 a pertinent need for additional research to identify the active ingredients and optimal
20 implementation strategies of interventions for this age group, in line with broader research
21 priorities for global mental health research in general (Tol et al. 2023). Furthermore there is a
22 need to better understand differential intervention impacts for boys and girls. Here we outline

1 some recommendations that can be drawn from our review, to inform further research and
2 development.

3 **Developmental Considerations**

4 Our review supports previous findings (e.g. Yu et al. 2023), identifying comparatively
5 more interventions for the upper ages in this bracket and limited evidence of what works for
6 younger children. Several interventions targeted children aged from approximately 9-10 years
7 old upwards into adolescence. In addition, several of the reviews from HIC indicated a gap in
8 effective interventions for the younger age bracket. As child development is occurring rapidly
9 during this period, and can vary in different contexts given environmental conditions, a
10 developmental approach with careful consideration of strategies and delivery methods for
11 different ages and stages of development will be needed (Kågström et al. 2023).

12 **Transdiagnostic, Tailored Approaches**

13 Across all categories of symptom presentations, interventions conducted in LMICs
14 utilised cognitive-behavioural therapy techniques, parent skills training and problem-solving, and
15 these strategies had most support in global literature. The majority of studies in LMICs focused
16 on specific problems (e.g. anxiety, ADHD), with fewer addressing a combination of presenting
17 symptoms (e.g. internalizing and externalizing symptoms together). Interventions focusing on
18 specific problems increase complexity for assessment and diagnostic procedures and create a
19 burden for training providers on multiple intervention packages.

20 To meet the need for effective transdiagnostic psychological interventions that address
21 the complex nature of diverse presenting problems in children, several promising examples of
22 modular, adaptable non-specialist interventions that can be tailored to meet the specific needs of
23 individual children are emerging in LMICs. For example, the Common Elements Treatment

1 Approach shows potential as a modular approach that can be provided by supervised non-
2 specialists, however, to date there have been no controlled trials of this intervention for younger
3 children (only pre-post studies) and the necessity of high quality training and supervision on
4 identifying primary presenting problems and sequencing of intervention components has been
5 noted (Bosqui et al. 2023; Murray et al. 2018). Similarly, several modular whole-family
6 interventions have been developed, with early indications of feasible delivery by non- specialists
7 (Brown et al. 2022; Puffer et al. 2020). However, no RCT results are available to date, and
8 studies have only included older children or adolescents.

9 The Modular Approach to Therapy for Children is a flexible and transdiagnostic
10 treatment approach that utilizes 33 components from evidence-based treatments, with clinicians
11 selecting and ordering components based on decision-making trees (Chorpita and Weisz 2009).
12 While studies with therapists in the USA have found positive results of this approach when
13 therapists were provided weekly individual consultation with MATCH experts (e.g., Chorpita et
14 al. 2017; Weisz et al. 2012), later studies indicated that when MATCH was implemented under
15 more ‘real world’ conditions involving group consultation, without weekly supervision from
16 MATCH experts, the impacts clinical outcomes were not significantly better than standard
17 practice (Merry et al. 2022; Weisz et al. 2020). A simplified transdiagnostic intervention called
18 FIRST, based on five core principles (Feeling Calm, Increasing Motivation, Repairing Thoughts,
19 Solving Problems, Trying the Opposite), has shown promise in children as young as seven, but
20 requires further evaluation in randomized controlled trials (Cho et al. 2021; Weisz et al. 2017).
21 When delivering these approaches via non-specialists, the challenge will lie in decision-making
22 regarding component selection and sequencing, which is challenging even among professionals
23 (Weisz et al. 2021). Further research is needed into how to best support non-specialists to do this,

1 without reliance on intensive training and supervision models which may not be feasible in
2 under-resourced settings.

3 **Delivery Agent**

4 In LMICs and humanitarian settings there are substantial barriers to ensuring access to
5 mental health care for children. It is therefore crucial to develop feasible, scalable interventions
6 that are based on evidence-based techniques and can be implemented by trained and supervised
7 non-specialists. While most intervention evaluations identified in LMICs were delivered by
8 specialists, our review found promising examples of interventions successfully delivered by non-
9 specialists, including teachers. In our review of the global literature, there was some indication
10 that specialist providers were more effective in school settings (Caldwell et al. 2019), but there
11 were very few reviews that adequately identify optimal delivery agents. Beyond developing
12 effective interventions, it is essential to determine the most strategic entry points and platforms
13 for their delivery to enhance the overall effectiveness and impact.

14 It is important that guidance on the recruitment, training and supportive supervision of
15 non-specialist workers accompanies an intervention package, and that lessons on these issues are
16 applied from adult mental health and related child health fields (Tomlinson et al. 2018). We
17 found limited data to support particular training and supervision models, however, brief focused
18 training (e.g. 2 weeks) followed by observed practice and ongoing supervision and support were
19 common in LMIC studies with non-specialist providers. Developing models of training and
20 supervision that don't rely on continuous support from intervention developers or international
21 teams is important for scalability. For example, in two studies of the EASE intervention, a Train
22 the Trainer was provided for local trainers, who then train and supervise facilitators, and
23 themselves receive regular remote based consultation as needed. Experiences in the COVID-19

1 pandemic indicate that remote supervision is a feasible alternative to face-to-face sessions, which
2 may be considered where logistical barriers exist (Cunningham et al. 2021; Ellison et al. 2021;
3 Nicholas et al. 2021; Smith et al. 2020). The UNICEF-WHO EQUIP tools may be an effective
4 way to train, assess, and monitor the needed competencies in facilitators, given recent research
5 indicating the promise of competency-focused trainings (Jordans et al. 2022). As professional
6 development opportunities relevant to working with this age group are currently very limited,
7 investment is needed into implementation science research to elucidate optimal methods for
8 training, supervising, supporting, and retaining a child mental health workforce that can deliver
9 mental health interventions with quality at scale.

10 **Delivery Format**

11 There were examples of effective group and individual format interventions in LMICs,
12 and there were mixed recommendations regarding optimal format in global guidelines. While
13 group-based interventions offer lower costs and social benefits, individual delivery provides
14 flexibility and adaptability, particularly in addressing parental and family dynamics influencing
15 child mental health. For childhood anxiety, the Cochrane review on CBT for childhood anxiety
16 found that group delivery was not more effective in reducing anxiety diagnoses, but that parents
17 and children enrolled in groups reported lower levels of symptoms (James et al. 2020). Other
18 reviews that compared group and individual formats found that both were effective
19 (Sigurvinsdottir et al. 2020) and that group-based CBT is more effective than individually
20 delivered (Luo and McAloon 2021), however these reviews included adolescent samples. On the
21 other hand, for children with externalizing behaviours, reviews indicate that individual delivery
22 of programmes may be more effective (e.g. Baumel et al. 2021; McMahan et al. 2021). In order

1 to provide the tailored transdiagnostic approach outlined above, individual delivery format may
2 be more feasible.

3 **Caregiver Involvement**

4 Findings suggest that programmes should include elements directed at both children and
5 caregivers, depending on the child's needs. For externalizing problems, parent-directed support
6 and improving the parent-child relationship are recognized as beneficial (Leijten, Gardner,
7 Melendez-Torres, et al. 2018). However, other reviews indicate that parental involvement is not
8 necessarily essential in the treatment of anxiety (Cordier et al. 2021; Peris et al. 2021; Wergeland
9 et al. 2021). Children may also benefit from learning strategies independently from their families
10 to address external sources of anxiety (e.g. at school) (Cordier et al. 2021).

11 Caregivers in challenging settings often experience heightened distress, impacting their
12 ability to provide responsive parenting. In this way, caregiver distress can be a significant
13 mediator of the impact of adversity on parenting, and therefore on child mental health outcomes
14 (Bryant and Silove 2018; Sim et al. 2018). Interventions that combine parenting skills with
15 caregiver wellbeing have shown promise in improving caregiver and child mental health
16 outcomes (e.g. Miller et al. 2023). Therefore, with this age group it is likely to be beneficial to
17 involve caregivers in interventions with the aim to promote support to the child, ensure their own
18 wellbeing, and build positive family dynamics.

19 **Outreach and Screening**

20 In LMIC studies, outreach and screening were typically conducted specifically for the
21 research study, often in clinical settings, and often using clinician diagnosis. To implement
22 transdiagnostic interventions in diverse community settings, it will be crucial to develop a
23 developmentally- and gender-appropriate tool for non-specialist teams to identify both boys and

1 girls in need and integrate detection and screening into existing services. Referral pathways to
2 specialist services should also be established. The ReachNow tool (van den Broek et al. 2023)
3 has shown promise in accurately identifying and referring children and adolescents to MHPSS
4 services, and could be adapted for this purpose.

5 **Limitations**

6 In order to draw recommendations for designing new interventions, we took a pragmatic
7 approach to analysing available literature and did not aim to systematically capture all global
8 evidence on interventions for this age range, nor conduct meta-analyses to conclusively
9 determine effectiveness of interventions. It is possible that despite our efforts to include pertinent
10 research, some important studies or reviews may have been omitted. In addition, parts of our
11 search were limited to studies published in English due to resource constraints.

12 **Conclusion**

13 Middle childhood is a crucial period for social and emotional development, yet, evidence
14 on effective psychological treatments for children that need them is lacking, particularly for
15 children living in LMICs, humanitarian emergencies, and contexts of adversity. Interventions to
16 improve child mental health outcomes should be grounded in the strongest available evidence,
17 while being responsive and adaptable to varying contexts. Our findings indicate the potential
18 promise of transdiagnostic interventions delivered by non-specialist providers to both children
19 and caregivers, with utilization of cognitive behavioural treatment components. Future efforts
20 should include the investigation of both the impact and implementation of interventions
21 delivered in these settings, with consideration of differential needs and impacts based on gender
22 and developmental stages.

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8

9 **Author contribution statement**

10 The design, conduct, and interpretation of this evidence review was informed and guided by all
11 authors. Searches, screening of sources, data extraction, synthesis, and drafting of the manuscript
12 was conducted jointly by FB, CL, and SS. All authors provided critical review of the final
13 manuscript. The authors alone are responsible for the views expressed in this article and they do
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16

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21

22 **Conflict of interest statement**

23 Conflicts of Interest: None

1 **Data availability statement**

2 Data availability is not applicable to this article as no new data were created or analysed in this
3 study.

4

5 **Ethics statement**

6 This study did not involve human participants, tissue, or data.

7

8

9

References: Studies Synthesised in Strategy 1

- 1
2
3 Abdulmalik, J., Ani, C., Ajuwon, A. J., & Omigbodun, O. (2016). Effects of problem-solving
4 interventions on aggressive behaviours among primary school pupils in Ibadan, Nigeria.
5 *Child and Adolescent Psychiatry and Mental Health, 10*, 1-10.
- 6 Abedi, M. R., & Vostanis, P. (2010). Evaluation of quality of life therapy for parents of children
7 with obsessive–compulsive disorders in Iran. *European Child & Adolescent Psychiatry,*
8 *19*, 605-613.
- 9 Amin, R., Nadeem, E., Iqbal, K., Asadullah, M. A., & Hussain, B. (2020). Support for Students
10 Exposed to Trauma (SSET) Program: An approach for building resilience and social
11 support among flood-impacted children. *School Mental Health, 12*(3), 493-506.
- 12 Behbahani, M., Zargar, F., Assarian, F., & Akbari, H. (2018). Effects of mindful parenting
13 training on clinical symptoms in children with attention deficit hyperactivity disorder and
14 parenting stress: Randomized controlled trial. *Iranian Journal of Medical Sciences,*
15 *43*(6), 596.
- 16 Bryant, R. A., Malik, A., Aqel, I. S., Ghatasheh, M., Habashneh, R., Dawson, K. S., Watts, S.,
17 Jordans, M. J. D., Brown, F. L., van Ommeren, M., & Akhtar, A. (2022). Effectiveness
18 of a brief group behavioural intervention on psychological distress in young adolescent
19 Syrian refugees: A randomised controlled trial. *PLOS Medicine, 19*(8), e1004046.
- 20 Catani, C., Kohiladevy, M., Ruf, M., Schauer, E., Elbert, T., & Neuner, F. (2009). Treating
21 children traumatized by war and tsunami: A comparison between exposure therapy and
22 meditation-relaxation in North-East Sri Lanka. *BMC Psychiatry, 9*(22).

- 1 Coelho, L. F., Barbosa, D. L. F., Rizzutti, S., Bueno, O. F. A., & Miranda, M. C. (2017). Group
2 cognitive behavioral therapy for children and adolescents with ADHD. *Psicologia:
3 Reflexão e Crítica, 30*.
- 4 Daryabeigi, M., Pourmohamdreza-Tajrishi, M., Dolatshahi, B., & Bakhshi, E. (2020). The
5 effectiveness of cognitive-behavioral therapy on internalizing problems of children with
6 externalizing disorders. *Iranian Rehabilitation Journal, 18(2)*, 193-202.
- 7 David, O. A., David, D., & Dobrean, A. (2014). Efficacy of the rational positive parenting
8 program for child externalizing behavior: Can an emotion-regulation enhanced cognitive-
9 behavioral parent program be more effective than a standard one? *Journal of Evidence-
10 Based Psychotherapies, 14(2)*.
- 11 Dawson, K., Joscelyne, A., Meijer, C., Steel, Z., Silove, D., & Bryant, R. A. (2018). A
12 controlled trial of trauma-focused therapy versus problem-solving in Islamic children
13 affected by civil conflict and disaster in Aceh, Indonesia. *Australian & New Zealand
14 Journal of Psychiatry, 52(3)*, 253-261.
- 15 Dorsey, S., Lucid, L., Martin, P., King, K. M., O'Donnell, K., Murray, L. K., Wasonga, A. I.,
16 Itemba, D. K., Cohen, J. A., & Manongi, R. (2020). Effectiveness of task-shifted trauma-
17 focused cognitive behavioral therapy for children who experienced parental death and
18 posttraumatic stress in Kenya and Tanzania: a randomized clinical trial. *JAMA
19 Psychiatry, 77(5)*, 464-473.
- 20 Ebrahimi, L. S., Isfeedvajani, M. S., Mohammadi, A., Ghasemzadeh, S., Arani, A. M., & Saadat,
21 S. H. (2019). Comparison of the effectiveness of unified transdiagnostic therapy (UP-C)
22 with cognitive behavioral therapy (CBT) on depression anxiety symptoms in child

- 1 workers:Child Labour. *Journal of Research in Medical and Dental Science*, 7(2), 122-
2 130.
- 3 Edrissi, F., Havighurst, S. S., Aghebati, A., Habibi, M., & Arani, A. M. (2019). A pilot study of
4 the tuning in to kids parenting program in Iran for reducing preschool children's anxiety.
5 *Journal of Child and Family Studies*, 28, 1695-1702.
- 6 El-Khani, A., Cartwright, K., Maalouf, W., Haar, K., Zehra, N., Çokamay-Yılmaz, G., & Calam,
7 R. (2021). Enhancing Teaching Recovery Techniques (TRT) with parenting skills: RCT
8 of TRT+ parenting with trauma-affected Syrian refugees in Lebanon utilising remote
9 training with implications for insecure contexts and COVID-19. *International Journal of*
10 *Environmental Research and Public Health*, 18(16).
- 11 Ellas, L. C. D. S., Marturano, E. M., De Almeida Motta, A. M., & Giurlani, A. G. (2003).
12 Treating boys with low school achievement and behavior problems: Comparison of two
13 kinds of intervention. *Psychological Reports*, 92(1), 105-116.
- 14 Gavița, O. A., David, D., Bujoreanu, S., Tiba, A., & Ionuțiu, D. R. (2012). The efficacy of a
15 short cognitive-behavioral parent program in the treatment of externalizing behavior
16 disorders in Romanian foster care children: Building parental emotion-regulation through
17 unconditional self-and child-acceptance strategies. *Children and Youth Services Review*,
18 34(7), 1290-1297.
- 19 Hamidi, F., & Sobhani Tabar, S. (2021). Effect of psychodrama on post-traumatic stress disorder
20 symptoms in primary school students living in earthquake-stricken areas. *Iranian Journal*
21 *of Psychiatry and Clinical Psychology*, 26(4), 400-417.
- 22 Hateli, B. (2022). The effect of non-directive play therapy on reduction of anxiety disorders in
23 young children. *Counselling and Psychotherapy Research*, 22(1), 140-146.

- 1 Jordans, M. J., Brown, F. L., Kane, J., Taha, K., Steen, F., Ali, R., Elias, J., Meksassi, B., Aoun,
2 M., & Greene, C. M. (2023). Evaluation of the early adolescent skills for emotions
3 (EASE) intervention in Lebanon: A randomized controlled trial. *Comprehensive*
4 *Psychiatry*, *127*, 152424.
- 5 Jordans, M. J., Komproe, I. H., Tol, W. A., Kohrt, B. A., Luitel, N. P., Macy, R. D., & De Jong,
6 J. T. (2010). Evaluation of a classroom-based psychosocial intervention in conflict-
7 affected Nepal: A cluster randomized controlled trial. *Journal of Child Psychology and*
8 *Psychiatry*, *51*(7), 818-826.
- 9 Jordans, M. J., Tol, W. A., Ndayisaba, A., & Komproe, I. H. (2013). A controlled evaluation of a
10 brief parenting psychoeducation intervention in Burundi. *Social Psychiatry and*
11 *Psychiatric Epidemiology*, *48*, 1851-1859.
- 12 Kane, J. C., Murray, L. K., Cohen, J., Dorsey, S., Skavenski van Wyk, S., Galloway Henderson,
13 J., Imasiku, M., Mayeya, J., & Bolton, P. (2016). Moderators of treatment response to
14 trauma-focused cognitive behavioral therapy among youth in Zambia. *Journal of Child*
15 *Psychology and Psychiatry*, *57*(10), 1194-1202.
- 16 Kul, A., & Hamamci, Z. (2021). The effect of an anxiety-coping program for children based on
17 cognitive behavioral therapy on 4th graders' anxiety levels. *Education Quarterly*
18 *Reviews*, *4*(2), 287-300.
- 19 Lesmana, C., Suryani, L., Jensen, G., & Tiliopoulos, N. (2009). A spiritual-hypnosis assisted
20 treatment of children with PTSD after the 2002 Bali terrorist attack. *American Journal of*
21 *Clinical Hypnosis*, *52*(1), 23-34.

- 1 Malekpour, M., Aghababaei, S., & Hadi, S. (2014). Effectiveness of family, child, and family-
2 child based intervention on ADHD symptoms of students with disabilities. *International*
3 *Journal of Special Education*, 29(2), 29-34.
- 4 Malik, T. A., Rooney, M., Chronis-Tuscano, A., & Tariq, N. (2017). Preliminary efficacy of a
5 behavioral parent training program for children with ADHD in Pakistan. *Journal of*
6 *Attention Disorders*, 21(5), 390-404.
- 7 Mansurnejad, Z., Malekpour, M., Ghamarani, A., & Yarmmohamadiyan, A. (2019). The effects
8 of teaching self-determination skills on the externalizing behaviors of students with
9 emotional behavioral disorders. *Emotional and Behavioural Difficulties*, 24(2), 196-203.
- 10 Matos, M., Bauermeister, J. J., & Bernal, G. (2009). Parent-child interaction therapy for Puerto
11 Rican preschool children with ADHD and behavior problems: A pilot efficacy study.
12 *Family Process*, 48(2), 232-252.
- 13 Matta, R. M. d., & Ramos, D. G. (2021). The effectiveness of Sandplay Therapy in children who
14 are victims of maltreatment with internalizing and externalizing behavior problems.
15 *Estudos de Psicologia (Campinas)*, 38, e200036.
- 16 Mejia, A., Calam, R., & Sanders, M. R. (2015). A pilot randomized controlled trial of a brief
17 parenting intervention in low-resource settings in Panama. *Prevention Science*, 16, 707-
18 717.
- 19 Murray, L. K., Hall, B.J., Dorsey, S., Ugueto, A.M., Puffer, E.S., Sim, A., Ismael, A., Bass, J.,
20 Akiba, C., Lucid, L., Harrison, J., Erikson, A., Bolton, P.A. (2018). An evaluation of a
21 common elements treatment approach for youth in Somali refugee camps. *Global Mental*
22 *Health*, 5(e16).

- 1 Naderi, S., Naderi, S., Delavar, A., & Dortaj, F. (2019). The effect of physical exercise on
2 anxiety among the victims of child abuse. *Sport Sciences for Health, 15*, 519-525.
- 3 Nasab, H. M., & Alipour, Z. M. (2015). The effectiveness of Sandplay Therapy in reducing
4 symptoms of separation anxiety in children 5 to 7 years old. *Journal of Educational*
5 *Sciences & Psychology, 5*(1).
- 6 Obiweluzo, P. E., Ede, M. O., Onwurah, C. N., Uzodinma, U. E., Dike, I. C., & Ejiofor, J. N.
7 (2021). Impact of cognitive behavioural play therapy on social anxiety among school
8 children with stuttering deficit: a cluster randomised trial with three months follow-up.
9 *Medicine, 100*(19).
- 10 Özyurt, G., Gencer, Ö., Öztürk, Y., & Özbek, A. (2019). Is Triple P effective in childhood
11 anxiety disorder? A randomized controlled study. *Psychiatry and Clinical*
12 *Psychopharmacology, 29*(4), 570-578.
- 13 Özyurt, G. G., Özlem//Öztürk, Yusuf//Özbek, Aylin. (2016). Is Triple P Positive Parenting
14 Program effective on anxious children and their parents? 4th month follow up results.
15 *Journal of Child and Family Studies, 25*(5), 1646-1655.
- 16 Pityaratstian, N., Piyasil, V., Ketumarn, P., Sitdhiraksa, N., Ularntinon, S., & Pariwatcharakul,
17 P. (2015). Randomized controlled trial of group cognitive behavioural therapy for post-
18 traumatic stress disorder in children and adolescents exposed to tsunami in Thailand.
19 *Behavioural and Cognitive Psychotherapy, 43*(5), 549-561.
- 20 Ramdhonee-Dowlot, K., Essau, C. A., & Balloo, K. (2021). Effectiveness of the Super Skills for
21 Life programme in enhancing the emotional wellbeing of children and adolescents in
22 residential care institutions in a low- and middle-income country: A randomised waitlist-
23 controlled trial. *Journal of Affective Disorders, 278*, 327-338.

- 1 Sang, H., & Tan, D. (2018). Internalizing behavior disorders symptoms reduction by a social
2 skills training program among chinese students: A randomized controlled trial.
3 *NeuroQuantology*, *16*(5), 104-109.
- 4 Sevi Tok, E. S., Arkar, H., & Bildik, T. (2016). The effectiveness of cognitive behavioral
5 therapy, medication, or combined treatment for childhood anxiety disorders. *Turkish*
6 *Journal of Psychiatry*, *27*(2), 110-118.
- 7 Shaban, S., Baba, M., Mohd Noah, S., & Wan Jaafar, W. M. (2015). School-based multi-
8 component intervention: Symptoms of Iranian ADHD children. *Asian Social Science*, *11*,
9 212-220.
- 10 Soodabeh Bassak, N., Fahimeh Poloi, S., & Iran, D. (2014). Efficacy of family anxiety
11 management training with mothers of anxious preschool children. *Zahedan Journal of*
12 *Research in Medical Sciences* *16*(5), 45-49.
- 13 Sutarmi, S. K., & Nuryanti, E. (2020). Effectiveness of smart brain exercise and loving touch
14 therapy on behavior among children with attention deficit hyperactive disorder (ADHD).
15 *Systematic Reviews in Pharmacy*, *11*, 618-626.
- 16 Thabet, A. A. M., Vostanis, P., & Karim, K. (2005). Group crisis intervention for children
17 during ongoing war conflict. *European Child and Adolescent Psychiatry*, *14*(5), 262-269.
- 18 Tiwawatpakorn, N., Worachotekamjorn, J., & Tassanakijpanich, N. (2021). Effectiveness of
19 parenting training on emotional and behavioral problems in first through fourth grade
20 Thai children with ADHD: A randomized controlled study. *Psychological Reports*, *125*,
21 2470-2484.
- 22 Tol, W. A., Komproe, I. H., Jordans, M. J. D., Ndayisaba, A., Ntamutumba, P., Sipsma, H.,
23 Smallegange, E. S., Macy, R. D., & de Jong, J. (2014). School-based mental health

- 1 intervention for children in war-affected Burundi: A cluster randomized trial. *BMC*
2 *Medicine*, *12*(1), 1-12.
- 3 Tol, W. A., Komproe, I. H., Jordans, M. J. D., Vallipuram, A., Sipsma, H., Sivayokan, S., Macy,
4 R. D., & de Jong, J. T. (2012). Outcomes and moderators of a preventive school-based
5 mental health intervention for children affected by war in Sri Lanka: A cluster
6 randomized trial. *World Psychiatry*, *11*(2), 114-122.
- 7 Tol, W. A., Komproe, I. H., Susanty, D., Jordans, M. J. D., Macy, R. D., & De Jong, J. (2008).
8 School-based mental health intervention for children affected by political violence in
9 Indonesia: A cluster randomized trial. *Journal of the American Medical Association*,
10 *300*(6), 655-662.
- 11 Tol, W. A., Komproe, I. H., Jordans, M. J., Gross, A. L., Susanty, D., Macy, R. D., & de Jong, J.
12 T. (2010). Mediators and moderators of a psychosocial intervention for children affected
13 by political violence. *Journal of Consulting and Clinical Psychology*, *78*(6), 818-828.
- 14 Yusuf, Ö., Gonka, Ö., & Pekcanlar Aynur, A. (2019). The effects of the triple P-positive
15 parenting programme on parenting, family functioning and symptoms of attention-
16 deficit/hyperactivity disorder: A randomized controlled trial. *Psychiatry and Clinical*
17 *Psychopharmacology*, *29*(4), 665-673.

18

19

Remaining References

- 20 Baourda, V. C., Brouzos, A., Mavridis, D., Vassilopoulos, S. P., Vatkali, E., & Boumpouli, C.
21 (2021). Group psychoeducation for anxiety symptoms in youth: Systematic review and
22 meta-analysis. *Journal for Specialists in Group Work*, *47*(1), 22-42.

23

<https://doi.org/10.1080/01933922.2021.1950881>

- 1 Barbui, C., et al. (2020). Efficacy of psychosocial interventions for mental health outcomes in
2 low-income and middle-income countries: An umbrella review. *Lancet Psychiatry*, 7(2),
3 162-172.
- 4 Baumel, A., Mathur, N., Pawar, A., & Muench, F. (2021). Psychosocial interventions for
5 children with externalized behavior problems: An updated meta-analysis of moderator
6 effects. *Journal of Child and Family Studies*, 30(1), 65-86.
7 <https://doi.org/10.1007/s10826-020-01863-6>
- 8 Bisson, J. I., Berliner, L., Cloitre, M., Forbes, D., Jensen, T. K., Lewis, C., Monson, C. M., Olf,
9 M., Pilling, S., Riggs, D. S., Roberts, N. P., & Shapiro, F. (2019). The International
10 Society for Traumatic Stress Studies new guidelines for the prevention and treatment of
11 posttraumatic stress disorder: Methodology and development process. *Journal of*
12 *Traumatic Stress*, 32(4), 475-483. <https://doi.org/10.1002/jts.22421>
- 13 Blackmore, R., Boyle, J. A., Fazel, M., Ranasingha, S., Gray, K. M., Fitzgerald, G., Misso, M., &
14 Gibson-Helm, M. (2020). The prevalence of mental illness in refugees and asylum
15 seekers: A systematic review and meta-analysis. *PLoS medicine*, 17(9), e1003337.
- 16 Bosqui, T., Mayya, A., Farah, S., Shaito, Z., Jordans, M. J. D., Pedersen, G. A., Betancourt, T.
17 S., Carr, A., Donnelly, M., & Brown, F. L. (under review). Parenting and family
18 interventions in lower and middle-income countries for child and adolescent mental
19 health: A systematic review.
- 20 Bosqui, T., McEwen, F. S., Chehade, N., Moghames, P., Skavenski, S., Murray, L., Karam, E.,
21 Weierstall-Pust, R., & Pluess, M. (2023). What drives change in children receiving
22 telephone-delivered Common Elements Treatment Approach (t-CETA)? A multiple n = 1

- 1 study with Syrian refugee children and adolescents in Lebanon. *Child Abuse & Neglect*,
2 106388. [https://doi.org/https://doi.org/10.1016/j.chiabu.2023.106388](https://doi.org/10.1016/j.chiabu.2023.106388)
- 3 Braitto, I., Rudd, T., Buyuktaskin, D., Ahmed, M., Glancy, C., & Mulligan, A. (2022). Systematic
4 review of effectiveness of art psychotherapy in children with mental health disorders.
5 *Irish Journal of Medical Science*, 191(3), 1369-1383.
- 6 Brown, F. L., Bosqui, T., Elias, J., Farah, S., Mayya, A., Abo Nakkoul, D., Walsh, B., Chreif, S.,
7 Einein, A., Meksassi, B., Abi Saad, R., Naal, H., Ghossainy, M. E., Donnelly, M.,
8 Betancourt, T. S., Carr, A., Puffer, E., El Chammay, R., & Jordans, M. J. D. (2022).
9 Family systemic psychosocial support for at-risk adolescents in Lebanon: Study protocol
10 for a multi-site randomised controlled trial. *Trials*, 23(1), 327.
11 <https://doi.org/10.1186/s13063-022-06284-y>
- 12 Brown, F. L., de Graaff, A. M., Annan, J., & Betancourt, T. S. (2017). Annual Research Review:
13 Breaking cycles of violence – a systematic review and common practice elements
14 analysis of psychosocial interventions for children and youth affected by armed conflict.
15 *Journal of Child Psychology and Psychiatry*, 58(4), 507-524.
16 <https://doi.org/10.1111/jcpp.12671>
- 17 Bryant, R., Edwards, B., Creamer, M., O'Donnell, M., Forbes, D., Felmingham, K., & Silove,
18 D., Steel, Z., Nikerson, A., McFarlane, A., Van Hoff, M., & Hadzi-Pavlovic, D. (2018).
19 The effect of post-traumatic stress disorder on refugees' parenting and their children's
20 mental health: a cohort study. *Lancet Public Health*, 3(5), e249–e258.
21 [https://doi.org/https://doi.org/10.1016/S2468-2667\(18\)30051-3](https://doi.org/https://doi.org/10.1016/S2468-2667(18)30051-3)
- 22 Caldwell, D. M., Davies, S. R., Hetrick, S. E., Palmer, J. C., Caro, P., López-López, J. A.,
23 Gunnell, D., Kidger, J., Thomas, J., French, C., Stockings, E., Campbell, R., & Welton,

- 1 N. J. (2019). School-based interventions to prevent anxiety and depression in children
2 and young people: a systematic review and network meta-analysis. *Lancet Psychiatry*,
3 6(12), 1011-1020. [https://doi.org/10.1016/s2215-0366\(19\)30403-1](https://doi.org/10.1016/s2215-0366(19)30403-1)
- 4 Charlson, F., van Ommeren, M., Flaxman, A., Cornett, J., Whiteford, H., & Saxena, S. (2019).
5 New WHO prevalence estimates of mental disorders in conflict settings: a systematic
6 review and meta-analysis. *The Lancet*, 394 (10194), 240-248.
7 [https://doi.org/10.1016/S0140-6736\(19\)30934-1](https://doi.org/10.1016/S0140-6736(19)30934-1)
- 8 Chipalo, E. (2021). Is trauma focused-cognitive behavioral therapy (TF-CBT) effective in
9 reducing trauma symptoms among traumatized refugee children? A systematic review.
10 *Journal of Child & Adolescent Trauma*, 14(4), 545-558.
- 11 Cho, E., Bearman, S. K., Woo, R., Weisz, J. R., & Hawley, K. M. (2021). A second and third
12 look at FIRST: Testing adaptations of a principle-guided youth psychotherapy. *Journal of*
13 *Clinical Child & Adolescent Psychology*, 50(6), 919-932.
- 14 Chorpita, B. F., & Weisz, J. R. (2009). *Modular approach to therapy for children with anxiety,*
15 *depression, trauma, or conduct problems (MATCH-ADTC)*. PracticeWise, LLC.
- 16 Chorpita, B. F., Daleiden, E. L., Park, A. L., Ward, A. M., Levy, M. C., Cromley, T., ... Krull, J.
17 L. (2017). Child STEPs in California: A cluster randomized effectiveness trial comparing
18 modular treatment with community implemented treatment for youth with anxiety,
19 depression, conduct problems, or traumatic stress. *Journal of Consulting and Clinical*
20 *Psychology*, 85(1), 13–25.
- 21 Cohen, J. A., & AACAP Work Group On Quality Issues. (2010). Practice parameter for the
22 assessment and treatment of children and adolescents with posttraumatic stress disorder.
23 *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(4), 414-430.

- 1 Cordier, R., Speyer, R., Mahoney, N., Arnesen, A., Mjelve, L. H., & Nyborg, G. (2021). Effects
2 of interventions for social anxiety and shyness in school-aged children: A systematic
3 review and meta-analysis. *PLoS One*, *16*(7), e0254117.
4 <https://doi.org/10.1371/journal.pone.0254117>
- 5 Cuijpers, P., Karyotaki, E., Ciharova, M., Miguel, C., Noma, H., Stikkelbroek, Y., Weisz, J. R.,
6 & Furukawa, T. A. (2021). The effects of psychological treatments of depression in
7 children and adolescents on response, reliable change, and deterioration: a systematic
8 review and meta-analysis. *European Child & Adolescent Psychiatry*.
9 <https://doi.org/10.1007/s00787-021-01884-6>
- 10 Cuijpers, P., Pineda, B. S., Ng, M. Y., Weisz, J. R., Munoz, R. F., Gentili, C., Quero, S., &
11 Karyotaki, E. (2021). A meta-analytic review: Psychological treatment of subthreshold
12 depression in children and adolescents. *Journal of the American Academy of Child and*
13 *Adolescent Psychiatry*, *60*(9), 1072-1084. <https://doi.org/10.1016/j.jaac.2020.11.024>
- 14 Cunningham, N. R., Ely, S. L., Garcia, B. N. B., & Bowden, J. (2021). Addressing pediatric
15 mental health using telehealth during coronavirus disease-2019 and beyond: A narrative
16 review. *Academic Pediatrics*, *21*(7), 1108-1117.
- 17 Danzi, B. A., & La Greca, A. M. (2021). Treating children and adolescents with posttraumatic
18 stress disorder: Moderators of treatment response. *Journal Clinical Child and Adolescent*
19 *Psychology*, *50*(4), 510-516. <https://doi.org/10.1080/15374416.2020.1823849>
- 20 Dawson, K. S., Bryant, R. A., Harper, M., Kuowei Tay, A., Rahman, A., Schafer, A., & van
21 Ommeren, M. (2015). Problem Management Plus (PM+): a WHO transdiagnostic
22 psychological intervention for common mental health problems. *World Psychiatry*, *14*(3),
23 354-357. <https://doi.org/10.1002/wps.20255>

- 1 Dawson, K. S., Watts, S., Carswell, K., Shehadeh, M. H., Jordans, M. J., Bryant, R. A., Miller,
2 K. E., Malik, A., Brown, F. L., & Servili, C. (2019). Improving access to evidence-based
3 interventions for young adolescents: Early Adolescent Skills for Emotions (EASE).
4 *World Psychiatry, 18*(1), 105.
- 5 Del Giudice, M., *Middle childhood: An evolutionary-developmental synthesis*, in *Handbook of*
6 *life course health development*. 2018, Springer, Cham. p. 95-107.
- 7 Ellison, K. S., Guidry, J., Picou, P., Adenuga, P., & Davis III, T. E. (2021). Telehealth and
8 autism prior to and in the age of COVID-19: A systematic and critical review of the last
9 decade. *Clinical Child and Family Psychology Review, 24*(3), 599-630.
- 10 Feinstein, L., & Bynner, J. (2004). The importance of cognitive development in middle
11 childhood for adulthood socioeconomic status, mental health, and problem
12 behavior. *Child Development, 75*(5), 1329-1339.
- 13 Gardner, F., Leijten, P., Harris, V., Mann, J., Hutchings, J., Beecham, J., Bonin, E.-M., Berry,
14 V., McGilloway, S., & Gaspar, M. (2019). Equity effects of parenting interventions for
15 child conduct problems: a pan-European individual participant data meta-analysis. *The*
16 *Lancet Psychiatry, 6*(6), 518-527.
- 17 Hetrick, S. E., Cox, G. R., Witt, K. G., Bir, J. J., & Merry, S. N. (2016). Cognitive behavioural
18 therapy (CBT), third-wave CBT and interpersonal therapy (IPT) based interventions for
19 preventing depression in children and adolescents. *The Cochrane Library, 2016* (8),
20 CD003380.
- 21 Hugh-Jones, S., Beckett, S., Tumelty, E., & Mallikarjun, P. (2021). Indicated prevention
22 interventions for anxiety in children and adolescents: a review and meta-analysis of

- 1 school-based programs. *European Child and Adolescent Psychiatry*, 30(6), 849-860.
2 <https://doi.org/10.1007/s00787-020-01564-x>
- 3 James, A. C., Reardon, T., Soler, A., James, G., & Creswell, C. (2020). Cognitive behavioural
4 therapy for anxiety disorders in children and adolescents. *Cochrane Database of*
5 *Systematic Reviews*, 11, CD013162.
- 6 Jordans, M. J. D., Steen, F., Koppenol-Gonzalez, G. V., El Masri, R., Coetzee, A. R., Chamate,
7 S., ... & Kohrt, B. A. (2022). Evaluation of competency-driven training for facilitators
8 delivering a psychological intervention for children in Lebanon: a proof-of-concept
9 study. *Epidemiology and Psychiatric Sciences*, 31, e48.
- 10 Kågström, A., Juríková, L., & Guerrero, Z. (2023). Developmentally appropriate mental health
11 literacy content for school-aged children and adolescents. *Cambridge Prisms: Global*
12 *Mental Health*, 10, e25.
- 13 Kininger, R. L., O'Dell, S. M., & Schultz, B. K. (2018). The feasibility and effectiveness of
14 school-based modular therapy: A systematic literature review. *School Mental Health*, 10,
15 339-351.
- 16 Kip, A., Priebe, S., Holling, H., & Morina, N. (2020). Psychological interventions for
17 posttraumatic stress disorder and depression in refugees: A meta-analysis of randomized
18 controlled trials. *Clinical Psychology & Psychotherapy*, 27(4), 489-503.
- 19 Kjøbli, J., Melendez-Torres, G., Gardner, F., Backhaus, S., Linnerud, S., & Leijten, P. (2022).
20 Research review: Effects of parenting programs for children's conduct problems on
21 children's emotional problems—a network meta-analysis. *Journal of Child Psychology*
22 *and Psychiatry*, 64(3), 348-356.

- 1 Lawton, K., & Spencer, A. (2021). A full systematic review on the effects of cognitive
2 behavioural therapy for mental health symptoms in child refugees. *Journal of Immigrant
3 and Minority Health, 23*(3), 624-639.
- 4 Leijten, P., Gardner, F., Landau, S., Harris, V., Mann, J., Hutchings, J., Beecham, J., Bonin, E.
5 M., & Scott, S. (2018). Research Review: Harnessing the power of individual participant
6 data in a meta-analysis of the benefits and harms of the Incredible Years parenting
7 program. *Journal of Child Psychology and Psychiatry, 59*(2), 99-109.
- 8 Leijten, P., Gardner, F., Melendez-Torres, G., Van Aar, J., Hutchings, J., Schultz, S., Knerr, W.,
9 & Overbeek, G. (2018). What to teach parents to reduce disruptive child behavior: two
10 meta-analyses of parenting program components. *Journal of the American Academy of
11 Child and Adolescent Psychiatry, 58*(2).
- 12 Leijten, P., Gardner, F., Melendez-Torres, G., Van Aar, J., Hutchings, J., Schulz, S., Knerr, W.,
13 & Overbeek, G. (2019). Meta-analyses: Key parenting program components for
14 disruptive child behavior. *Journal of the American Academy of Child & Adolescent
15 Psychiatry, 58*(2), 180-190.
- 16 Leijten, P., Gardner, F., Melendez-Torres, G., Weeland, J., Hutchings, J., Landau, S.,
17 McGilloway, S., Overbeek, G., van Aar, J., & Menting, A. (2019). Co-occurring change
18 in children's conduct problems and maternal depression: Latent class individual
19 participant data meta-analysis of the Incredible Years parenting program. *Development
20 and Psychopathology, 31*(5), 1851-1862.
- 21 Leijten, P., Melendez-Torres, G., & Gardner, F. (2022). Research Review: The most effective
22 parenting program content for disruptive child behavior—a network meta-analysis.
23 *Journal of Child Psychology and Psychiatry, 63*(2), 132-142.

- 1 Leijten, P., Melendez-Torres, G., Gardner, F., Van Aar, J., Schulz, S., & Overbeek, G. (2018).
2 Are relationship enhancement and behavior management “the golden couple” for
3 disruptive child behavior? Two meta-analyses. *Child Development*, 89(6), 1970-1982.
- 4 Li, N., Peng, J., & Li, Y. (2021). Effects and moderators of Triple P on the social, emotional, and
5 behavioral problems of children: Systematic review and meta-analysis. *Frontiers in*
6 *Psychology*, 12, 709851.
- 7 Liang, J. H., Li, J., Wu, R. K., Li, J. Y., Qian, S., Jia, R. X., Wang, Y. Q., Qian, Y. X., & Xu, Y.
8 (2021). Effectiveness comparisons of various psychosocial therapies for children and
9 adolescents with depression: a Bayesian network meta-analysis. *European Child and*
10 *Adolescent Psychiatry*, 30(5), 685-697. <https://doi.org/10.1007/s00787-020-01492-w>
- 11 Lu, C., Li Z., and Patel V. (2018). Global child and adolescent mental health: the orphan of
12 development assistance for health. *PLoS Medicine*, 15(3), e1002524.
- 13 Luo, A., & McAloon, J. (2021). Potential mechanisms of change in cognitive behavioral therapy
14 for childhood anxiety: A meta-analysis. *Depression and Anxiety*, 38(2), 220-232.
15 <https://doi.org/10.1002/da.23116>
- 16 Ma, L., Zhang, Y., Huang, C., & Cui, Z. (2020). Resilience-oriented cognitive behavioral
17 interventions for depressive symptoms in children and adolescents: A meta-analytic
18 review. *Journal of Affective Disorders*, 270, 150-164.
19 <https://doi.org/10.1016/j.jad.2020.03.051>
- 20 McAloon, J., & de la Poer Beresford, K. (2021). Online behavioral parenting interventions for
21 disruptive behavioral disorders: A PRISMA based systematic review of clinical trials.
22 *Child Psychiatry and Human Development*. <https://doi.org/10.1007/s10578-021-01253-z>

- 1 McMahon, R. J., Goulter, N., & Frick, P. J. (2021). Moderators of psychosocial intervention
2 response for children and adolescents with conduct problems. *Journal of Clinical Child
3 and Adolescent Psychology, 50*(4), 525-533.
4 <https://doi.org/10.1080/15374416.2021.1894566>
- 5 McWey, L. M. (2022). Systemic interventions for traumatic event exposure: A 2010–2019
6 decade review. *Journal of Marital and Family Therapy, 48*(1), 204-230.
- 7 Merry, S.N., Hopkins, S., Lucassen, M.F.G., Stasiak, K., Weisz, J.R., Frampton, C.M.A.,
8 Bearman, S.K., Ugueto, A.M., Herren, J., Cribb-Su'a, A., Kingi-Ulave, D., Loy, J.,
9 Hartdegen, M., & Crengle, S. (2020). Clinician training in the Modular Approach to
10 Therapy for Children to enhance the use of empirically supported treatments and clinical
11 outcomes: A randomized clinical trial. *JAMA Network Open, 3* (8):e2011799.
- 12 Miller, K. E., Chen, A., Koppenol-Gonzalez, G. V., Bakolis, I., Arnous, M., Tossyeh, F., El
13 Hassan, A., Saleh, A., Saade, J., & Nahas, N. (2023). Supporting parenting among Syrian
14 refugees in Lebanon: a randomized controlled trial of the caregiver support intervention.
15 *Journal of Child Psychology and Psychiatry, 64*(1), 71-82.
- 16 Money, R., Wilde, S., & Dawson, D. (2021). The effectiveness of Theraplay for children under
17 12—a systematic literature review. *Child and Adolescent Mental Health, 26*(3), 238-251.
- 18 Murray, L. K., Hall, B.J., Dorsey, S., Ugueto, A.M., Puffer, E.S., Sim, A., Ismael, A., Bass, J.,
19 Akiba, C., Lucid, L., Harrison, J., Erikson, A., Bolton, P.A. (2018). An evaluation of a
20 common elements treatment approach for youth in Somali refugee camps. *Global Mental
21 Health, 5*(16). <https://doi.org/10.1017/gmh.2018.7>

- 1 National Institute for Health and Care Excellence (2019). *Guideline: Depression in Children and*
2 *Young People: Identification and Management*. Manchester, UK: National Institute for
3 Health and Care Excellence.
- 4 National Institute for Health and Care Excellence (2023). *Guideline: Antisocial Behavior and*
5 *Conduct Disorders in Children and Young People: recognition and management*.
6 Manchester, UK: National Institute for Health and Care Excellence.
- 7 Nicholas, J., Bell, I. H., Thompson, A., Valentine, L., Simsir, P., Sheppard, H., & Adams, S.
8 (2021). Implementation lessons from the transition to telehealth during COVID-19: a
9 survey of clinicians and young people from youth mental health services. *Psychiatry*
10 *Research*, 299, 113848.
- 11 Nuru-Jeter, A. M., Sarsour, K., Jutte, D. P., & Thomas Boyce, W. (2010). Socioeconomic
12 predictors of health and development in middle childhood: Variations by socioeconomic
13 status measure and race. *Issues in Comprehensive Pediatric Nursing*, 33(2), 59-81.
- 14 O'Brien, D., Harvey, K., Howse, J., Reardon, T., & Creswell, C. (2016). Barriers to managing
15 child and adolescent mental health problems: a systematic review of primary care
16 practitioners' perceptions. *British Journal of General Practice*, 66(651), e693-e707.
- 17 O'Connor, E. E., Scott, M. A., McCormick, M. P., & Weinberg, S. L. (2014). Early mother–
18 child attachment and behavior problems in middle childhood: the role of the subsequent
19 caregiving environment. *Attachment & Human Development*, 16(6), 590-612.
- 20 O'Connor, K. M., & Hayes, B. (2018). How effective are targeted interventions for externalizing
21 behavior when delivered in primary schools? *International Journal of School &*
22 *Educational Psychology*, 8(3), 161-173. <https://doi.org/10.1080/21683603.2018.1530157>

- 1 Odgers, K., Dargue, N., Creswell, C., Jones, M. P., & Hudson, J. L. (2020). The limited effect of
2 mindfulness-based interventions on anxiety in children and adolescents: A meta-analysis.
3 *Clinical Child and Family Psychology Review*, 23(3), 407-426.
4 <https://doi.org/10.1007/s10567-020-00319-z>
- 5 Parker, M. M., Hunnicutt Hollenbaugh, K. M., & Kelly, C. T. (2021). Exploring the impact of
6 child-centered play therapy for children exhibiting behavioral problems: A meta-analysis.
7 *International Journal of Play Therapy*, 30(4), 259-271.
8 <https://doi.org/10.1037/pla0000128>
- 9 Patterson, G. R. (1982). *Coercive family process* (Vol. 3). Eugene, OR: Castalia
- 10 Pedersen, G. A., Smallegange, E., Coetzee, A., Hartog, K., Turner, J., Jordans, M. J., & Brown,
11 F. L. (2019). A systematic review of the evidence for family and parenting interventions
12 in low-and middle-income countries: child and youth mental health outcomes. *Journal of*
13 *Child and Family Studies*, 1-20.
- 14 Peris, T. S., Thamrin, H., & Rozenman, M. S. (2021). Family intervention for child and
15 adolescent anxiety: A meta-analytic review of therapy targets, techniques, and outcomes.
16 *Journal of Affective Disorders*, 286, 282-295. <https://doi.org/10.1016/j.jad.2021.02.053>
- 17 Phillips, S., & Mychailyszyn, M. (2021). A review of Parent-Child Interaction Therapy (PCIT):
18 Applications for youth anxiety. *Children and Youth Services Review*, 125, 105986.
- 19 Powell, B. J., Patel, S. V., Haley, A. D., Haines, E. R., Knocke, K. E., Chandler, S., Katz, C. C.,
20 Seifert, H. P., Ake, G., 3rd, Amaya-Jackson, L., & Aarons, G. A. (2020). Determinants of
21 implementing evidence-based trauma-focused interventions for children and youth: A
22 systematic review. *Administration and Policy in Mental Health*, 47(5), 705-719.
23 <https://doi.org/10.1007/s10488-019-01003-3>

- 1 Puffer, E. S., Friis Healy, E., Green, E. P., M Giusto, A., N Kaiser, B., Patel, P., & Ayuku, D.
2 (2020). Family functioning and mental health changes following a family therapy
3 intervention in Kenya: A pilot trial. *Journal of Child and Family Studies*, 29, 3493-3508.
- 4 Purgato, M., Gross, A. L., Betancourt, T., Bolton, P., Bonetto, C., Gastaldon, C., Gordon, J.,
5 O'Callaghan, P., Papola, D., & Peltonen, K. (2018). Focused psychosocial interventions
6 for children in low-resource humanitarian settings: a systematic review and individual
7 participant data meta-analysis. *Lancet Global Health*, 6(4), e390-e400.
- 8 Reardon, T., Harvey, K., Baranowska, M., O'brien, D., Smith, L., & Creswell, C. (2017). What
9 do parents perceive are the barriers and facilitators to accessing psychological treatment
10 for mental health problems in children and adolescents? A systematic review of
11 qualitative and quantitative studies. *European child & adolescent psychiatry*, 26, 623-
12 647.
- 13 Retuerto, D. M., Ros Martinez de Lahidalga, I., & Ibanez Lasurtegui, I. (2020). Disruptive
14 behavior programs on primary school students: A systematic review. *European Journal
15 of Investigation in Health, Psychology and Education*, 10(4), 995-1009.
16 <https://doi.org/10.3390/ejihpe10040070>
- 17 Riise, E. N., Wergeland, G. J. H., Njardvik, U., & Ost, L. G. (2021). Cognitive behavior therapy
18 for externalizing disorders in children and adolescents in routine clinical care: A
19 systematic review and meta-analysis. *Clinical Psychology Review*, 83, 101954.
20 <https://doi.org/10.1016/j.cpr.2020.101954>
- 21 Sigurvinsdottir, A. L., Jensinudottir, K. B., Baldvinsdottir, K. D., Smarason, O., &
22 Skarphedinsson, G. (2020). Effectiveness of cognitive behavioral therapy (CBT) for child
23 and adolescent anxiety disorders across different CBT modalities and comparisons: a

- 1 systematic review and meta-analysis. *Nordic Journal of Psychiatry*, 74(3), 168-180.
2 <https://doi.org/10.1080/08039488.2019.1686653>
- 3 Silwal, A., Engilbertsdottier, S., Cuesta J., Newhouse, D., Steward, D. (2020). *Global estimate of*
4 *children in monetary poverty: An update* [Discussion Paper]. Washington D.C.: World
5 Bank
- 6 Sim, A., Bowes, L., & Gardner, F. (2018). Modeling the effects of war exposure and daily
7 stressors on maternal mental health, parenting, and child psychosocial adjustment: a
8 cross-sectional study with Syrian refugees in Lebanon. *Global Mental Health*, 5, 1-6.
9 <https://doi.org/https://doi.org/10.1017/gmh.2018.33>
- 10 Singla, D. R., Kohrt, B. A., Murray, L. K., Anand, A., Chorpita, B. F., & Patel, V. (2017).
11 Psychological treatments for the world: Lessons from low- and middle-income countries.
12 *Annual Review of Clinical Psychology*, 13, 149-181. [https://doi.org/10.1146/annurev-](https://doi.org/10.1146/annurev-clinpsy-032816-045217)
13 [clinpsy-032816-045217](https://doi.org/10.1146/annurev-clinpsy-032816-045217)
- 14 Smith, K., Ostinelli, E., Macdonald, O., & Cipriani, A. (2020). COVID-19 and telepsychiatry:
15 development of evidence-based guidance for clinicians. *JMIR mental health*, 7(8),
16 e21108.
- 17 Solmi, M., Radua, J., Olivola, M., Croce, E., Soardo, L., Salazar de Pablo, G., Il Shin, J.,
18 Kirkbride, J. B., Jones, P., & Kim, J. H. (2022). Age at onset of mental disorders
19 worldwide: large-scale meta-analysis of 192 epidemiological studies. *Molecular*
20 *Psychiatry*, 27(1), 281-295.
- 21 Sørli, M. A., Hagen, K. A., & Nordahl, K. B. (2021). Development of social skills during
22 middle childhood: Growth trajectories and school-related predictors. *International*
23 *Journal of School & Educational Psychology*, 9(sup1), S69-S87.

- 1 Stelmach, R., Kocher, E. L., Kataria, I., Jackson-Morris, A. M., Saxena, S., & Nugent, R. (2022).
2 The global return on investment from preventing and treating adolescent mental disorders
3 and suicide: a modelling study. *BMJ Global Health*, 7(6), e007759.
- 4 Stoll, R. D., Pina, A. A., & Schleider, J. (2020). Brief, non-pharmacological, interventions for
5 pediatric anxiety: Meta-analysis and evidence base status. *Journal of Clinical Child and*
6 *Adolescent Psychology*, 49(4), 435-459. <https://doi.org/10.1080/15374416.2020.1738237>
- 7 Strawn, J. R., Lu, L., Peris, T. S., Levine, A., & Walkup, J. T. (2021). Research review: Pediatric
8 anxiety disorders - what have we learnt in the last 10 years? *Journal of Child Psychology*
9 *and Psychiatry*, 62(2), 114-139. <https://doi.org/10.1111/jcpp.13262>
- 10 Thongseiratch, T., Leijten, P., & Melendez-Torres, G. (2020). Online parent programs for
11 children's behavioral problems: a meta-analytic review. *European Child & Adolescent*
12 *Psychiatry*, 29(11), 1555-1568.
- 13 Tol, W. A., Le, P. D., Harrison, S. L., Galappatti, A., Annan, J., Baingana, F. K., Betancourt, T.
14 S., Bizouerne, C., Eaton, J., & Engels, M. (2023). Mental health and psychosocial support
15 in humanitarian settings: research priorities for 2021–30. *Lancet Global Health*, 11(6),
16 e969-e975.
- 17 Tomlinson, M., Hunt, X., & Rotheram-Borus, M. J. (2018). Diffusing and scaling evidence-
18 based interventions: eight lessons for early child development from the implementation
19 of perinatal home visiting in South Africa. *Annals of New York Academy Sciences*,
20 1419(1), 218-229. <https://doi.org/10.1111/nyas.13650>
- 21 Turrini, G., Purgato, M., Acarturk, C., Anttila, M., Au, T., Ballette, F., Bird, M., Carswell, K.,
22 Churchill, R., Cuijpers, P., Hall, J., Hansen, L. J., Kösters, M., Lantta, T., Nosè, M.,
23 Ostuzzi, G., Sijbrandij, M., Tedeschi, F., Valimaki, M., . . . Barbui, C. (2019). Efficacy

- 1 and acceptability of psychosocial interventions in asylum seekers and refugees:
2 systematic review and meta-analysis. *Epidemiology and Psychiatric Sciences*, 28(4), 376-
3 388. <https://doi.org/10.1017/s2045796019000027>
- 4 UNHCR (2023). *Global Trends Forced Displacement in 2022*. Geneva: UNHCR.
- 5 UNICEF (2020). *Mental Health and Psychosocial Support for Children in Humanitarian*
6 *Settings: Updated Review of Evidence and Practice*. New York: UNICEF.
- 7 UNICEF (2021). *Global multisectoral operational framework*. New York: UNICEF.
- 8 UNICEF (2023). *The global costs and benefits of mental health and psychosocial support*
9 *interventions in education settings across the Humanitarian-Development Nexus*. New
10 York: UNICEF.
- 11 Valero Aguayo, L., Rodríguez Bocanegra, M., Ferro García, R., & Ascanio Velasco, L. (2021).
12 Meta-analysis of the efficacy and effectiveness of Parent Child Interaction Therapy
13 (PCIT) for child behaviour problems. *Psicothema*, 33(4), 544-555
- 14 van den Broek, M., Hegazi, L., Ghazal, N., Hamayel, L., Barrett, A., Kohrt, B. A., & Jordans, M.
15 J. (2023). Accuracy of a proactive case detection tool for internalizing and externalizing
16 problems among children and adolescents. *Journal of Adolescent Health*, 72(1), S88-S95.
- 17 van Ginneken, N., Chin, W. Y., Lim, Y. C., Ussif, A., Singh, R., Shahmalak, U., Purgato, M.,
18 Rojas-García, A., Uphoff, E., & McMullen, S. (2021). Primary-level worker
19 interventions for the care of people living with mental disorders and distress in low-and
20 middle-income countries. *Cochrane Database of Systematic Reviews* (8).
- 21 Walter HJ, Abright AR, Bukstein OG, Diamond J, Keable H, Ripperger-Suhler J, Rockhill C.
22 (2023). Clinical practice guideline for the assessment and treatment of children and
23 adolescents with major and persistent depressive disorders. *Journal of American*

- 1 *Academy of Child and Adolescent Psychiatry*, 62(5), 479-502. doi:
2 10.1016/j.jaac.2022.10.001
- 3 Walter HJ, Bukstein OG, Abright AR, Keable H, Ramtekkar U, Ripperger-Suhler J, Rockhill C.
4 (2020). Clinical practice guideline for the assessment and treatment of children and
5 adolescents with anxiety disorders. *Journal of American Academy of Child and*
6 *Adolescent Psychiatry*, 59 (10), 1107-1124. doi: 10.1016/j.jaac.2020.05.005
- 7 Weisz, J., Bearman, S. K., Santucci, L. C., & Jensen-Doss, A. (2017). Initial test of a principle-
8 guided approach to transdiagnostic psychotherapy with children and adolescents. *Journal*
9 *of Clinical Child & Adolescent Psychology*, 46(1), 44-58.
- 10 Weisz, J. R., Bearman, S. K., Ugueto, A. M., Herren, J. A., Evans, S. C., Cheron, D. M., ... &
11 Jensen-Doss, A. (2020). Testing robustness of Child STEPs effects with children and
12 adolescents: A randomized controlled effectiveness trial. *Journal of Clinical Child &*
13 *Adolescent Psychology*, 49(6), 883-896.
- 14 Weisz, J.R., Chorpita, B.F., Palinkas, L.A., Schoenwald, S.K., Miranda, J., Bearman, S.K.,
15 Daleiden, E.L., Ugueto, A.M., Ho, A., Martin, J., Gray, J., Alleyne, A., Langer, D.A.,
16 Southam-Gerow, M.A., Gibbons, R.D., and the Research Network on Youth Mental
17 Health. (2012). Testing standard and modular designs for psychotherapy with youth
18 depression, anxiety, and conduct problems: A randomized effectiveness trial. *Archives of*
19 *General Psychiatry*, 69 (3), 274-282.
- 20 Weisz JR, Fitzpatrick, O. M., Ventura-Conerly, K., & Cho, E. (2021). Process-based and
21 principle-guided approaches in youth psychotherapy. *World Psychiatry*, 20(3), 378-380.
- 22 Wergeland, G. J. H., Riise, E. N., & Ost, L. G. (2021). Cognitive behavior therapy for
23 internalizing disorders in children and adolescents in routine clinical care: A systematic

- 1 review and meta-analysis. *Clinical Psychology Review*, 83, 101918.
2 <https://doi.org/10.1016/j.cpr.2020.101918>
- 3 Whiteside, S. P. H., Sim, L. A., Morrow, A. S., Farah, W. H., Hilliker, D. R., Murad, M. H., &
4 Wang, Z. (2020). A Meta-analysis to Guide the Enhancement of CBT for Childhood
5 Anxiety: Exposure Over Anxiety Management. *Clinical Child and Family Psychology*
6 *Review*, 23(1), 102-121. <https://doi.org/10.1007/s10567-019-00303-2>
- 7 WHO (2016). *mhGAP intervention guide for mental, neurological and substance use disorders*
8 *in non-specialized health settings: mental health Gap Action Programme (mhGAP)*
9 (version 2.0 ed.). Geneva: World Health Organization
- 10 WHO (2020). *Guidelines on mental health promotive and preventive interventions for*
11 *adolescents: helping adolescents thrive*. Geneva: World Health Organization
- 12 WHO (2021). *WHO Mental Health Atlas 2020*. Geneva: World Health Organization
- 13 WHO (2022). *World Mental Health Report: Transforming Mental Health for All*. Geneva: World
14 Health Organization
- 15 Wolpert, M., Pote, I., & Sebastian, C. L. (2021). Identifying and integrating active ingredients
16 for mental health. *Lancet Psychiatry*, 8(9), 741-743.
- 17 Xiang, Y., Cipriani, A., Teng, T., Del Giovane, C., Zhang, Y., Weisz, J. R., Li, X., Cuijpers, P.,
18 Liu, X., & Barth, J. (2021). Comparative efficacy and acceptability of psychotherapies
19 for post-traumatic stress disorder in children and adolescents: a systematic review and
20 network meta-analysis. *BMJ Mental Health*, 24(4), 153-160.
- 21 Yin, B., Teng, T., Tong, L., Li, X., Fan, L., Zhou, X., & Xie, P. (2021). Efficacy and
22 acceptability of parent-only group cognitive behavioral intervention for treatment of

- 1 anxiety disorder in children and adolescents: a meta-analysis of randomized controlled
2 trials. *BMC Psychiatry*, 21(1), 29. <https://doi.org/10.1186/s12888-020-03021-0>
- 3 Yohannan, J., Carlson, J. S., & Volker, M. A. (2022). Cognitive behavioral treatments for
4 children and adolescents exposed to traumatic events: A meta-analysis examining
5 variables moderating treatment outcomes. *Journal of Traumatic Stress*, 35(2), 706-717.
6 <https://doi.org/10.1002/jts.22755>
- 7 Yu, R., Perera, C., Sharma, M., Ipince, A., Bakrania, S., Shokraneh, F., Sepulveda, J. S. M., &
8 Anthony, D. (2023). Child and adolescent mental health and psychosocial support
9 interventions: An evidence and gap map of low-and middle-income countries. *Campbell*
10 *Systematic Reviews*, 19(3), e1349.
- 11 Zarakoviti, E., Shafran, R., Papadimitriou, D., & Bennett, S. D. (2021). The efficacy of parent
12 training interventions for disruptive behavior disorders in treating untargeted comorbid
13 internalizing symptoms in children and adolescents: A systematic review. *Clinical Child*
14 *and Family Psychology Review*, 24(3), 542-552.

1 **Table 1:**
 2 Inclusion and exclusion criteria for the review
 3

	Inclusion criteria	Exclusion criteria
Population	Children 5-12 years experiencing emotional and/or behavioural problems (and/or their caregivers) LMIC studies: children living in a LMIC. Note that we also included studies conducted in the State of Palestine, Puerto Rico, and Romania (as it was an LMIC at the time of publication)	
Intervention	Intervention indicated for children identified as having emotional and/or behavioural problems requiring targeted support. This was defined by: i) participants were only included in the intervention if they showed elevated distress, or met diagnostic criteria (i.e. the intervention was not a preventive or promotive intervention for all children); and ii) the intervention specifically aimed to reduce of behavioural or emotional distress. Interventions were included if they were designed for caregivers, with children directly, or both	Interventions that include biological interventions (e.g. pharmacotherapy) Interventions for children with medical conditions, where the intervention has a primary focus on distress related to the medical condition rather than emotional or behavioural difficulties. Interventions for children with disabilities, with a primary focus on the disability rather than emotional or behavioural distress
Comparison	LMIC studies: randomised controlled trials, crossover trials, cluster randomised trials, factorial trials, or quasi-experimental design Global reviews: Systematic Review and/or Meta-analysis of randomised controlled trials	
Outcome	At least one quantitative outcome related to child emotional or behavioural distress	
Dates and Language	LMIC studies: we searched reference lists of reviews published between January 2012-January 2020 with the exception of a 2009 review with high relevance that was included Published in English, or other languages where translation was feasible. All identified studies were published in English or abstracts were able to be translated to English for initial review (4 studies). Child review: January 2020-January 2022 Parenting review: Published from January 2017-January 2022	

4

Table 2: Details of studies conducted in LMICs

First author, Year	Study Country	Sample	Attendees	Design	Child Age (years)	Intervention Name / Type	Therapeutic Approach	Format	Provider	Location	Target Child Outcome
Externalizing presentations (17 studies)											
Abdulmalik, 2016	Nigeria	34	Children	RCT	9- 14 (boys)	Brain Power Program	Cognitive behavioural & Problem solving	Group	Special.	School	Aggression, External. behaviours
Behbahani, 2018	Iran	56	Parents	RCT	7- 12	Mindful parenting	Mindfulness	Group	NR	Clinic/health facility	ADHD Symptoms
Coelho, 2017	Brazil	60	Both	QE	7- 14	Cognitive Behavioural Therapy	Cognitive behavioural & Parenting skills training	Group	Special.	Clinic/health facility	*Internal., External., ADHD symptoms, Social
David, 2014	Romania	106	Parents	RCT	4- 12	Rational Positive Parenting plus emotion regulation	Cognitive behavioural & Parenting skills training	Group	Special.	School	External. behaviours
Ellas, 2003	Brazil	35	Children	RCT	8- 11 (boys)	I Can Problem Solve (adapted)	Problem solving	Group	Special.	Clinic/health facility	Aggression, External. behaviours,
Gavita, 2012	Romania	97	Parents (foster)	RCT	5- 18	Short Enhanced Cognitive–Behavioral Parent Training	Cognitive behavioural & Parenting skills training	Group	Special.	NR	*External. behaviours
Malekpour, 2014	Iran	60	Both	RCT	9 (boys)	Barkley Family program, child attention & memory training	Family intervention; Attention training	NR	NR	School	ADHD symptoms
Malik, 2017	Pakistan	85	Parents	RCT	4- 12	Defiant Children Barkley programme (adapted)	Parenting skills training	Group & individual	Special.	Clinic/health facility	ADHD symptoms
Mansurnejad 2019	Iran	30	Both	RCT	11- 12 (boys)	Steps to Self Determination curriculum	Social & self determination skills	Group	Special.	School	External. behaviours

Matos, 2009	Puerto Rico	32	Both	RCT	4- 6	Parent-child interaction therapy	Parenting skills training	Individual	Trainee	Clinic/health facility	Hyperactivity, aggression, External. behaviours, Adaptive Functioning
Mejia, 2015	Panama	108	Parents	RCT	3- 12	Triple P Discussion Group -disobedience	Parenting skills training	Group	Special.	School	External. behaviours
Ojiambo, 2013	Uganda	60	Children	RCT	10- 12	Group Activity Play Therapy	Play therapy	Group	Special.	School within orphanage	Internal. and External. symptoms
Pandya, 2020	India & South Africa	110	Both (grand-parents)	RCT	Mean 8 (range NR)	Meditation program	Meditation, Movement	Individual	NR	NR	Self control & empowerment
Shaban, 2015	Iran	64	Teachers	RCT	9- 11	School-based Multi-component Intervention	Teacher training	NR	NR	School	ADHD symptoms
Sutarni, 2020	Indonesia	35	Children	RCT	6- 18	Loving Touch Therapy; Smart Brain exercises	Touch therapy & Cognitive exercises	NR	NR	School	ADHD symptoms
Tiwatpakorn, 2021	Thailand	63	Parents	RCT	Mean 8 (range NR)	Parent training programme (Self-developed)	Parenting skills training	Group	Special.	Clinic/health facility	*ADHD & External.behaviours
Yusuf, 2019	Turkey	48	Parents	RCT	7 - 12	Triple P Group	Parenting skills training	Group and individual	NR	Clinic/health facility / University	*ADHD symptoms, diagnoses, External. & Internal. symptoms
Internalizing presentations (15 studies)											
Abedi, 2010	Iran	40	Parents	RCT	6 - 18	Quality of Life Therapy	Cognitive	Group	Special.	Clinic/health facility	Anxiety, OCD symptoms, Quality of life

Bassak-Nejad, 2014	Iran	50	Parents	QE	4-6	parental anxiety management training program	Cognitive Behavioural (for parents)	NR	NR	Kindergarten	Anxiety
Bryant, 2022	Jordan	471	Both	RCT	10-14	Early Adolescent Skills for Emotions	Cognitive Behavioural	Group	Non-Sp	Community	Internal. Symptoms
Ebrahimi, 2019	Iran	45	Children	QE	8 - 11 (girls)	Unified Protocol for Transdiagnostic Treatment of Emotional Disorders in Children	Cognitive Behavioural	NR	NR	Not stated	*Depression & Anxiety
Edrissi, 2019	Iran	56	Parents	RCT	4 - 6	Tuning in to Kids	Parent emotional coaching	Group	Trainee	Community	Anxiety
Hateli, 2021	Iran	20	Children	QE	7 - 9	Non-directive play therapy	Play	Group	Special.	Clinic/health facility	Anxiety
Jordans, 2023	Lebanon	198	Both	RCT	10-14	Early Adolescent Skills for Emotions	Cognitive Behavioural	Group	Non-Sp	Community	*Internal. Symptoms
Kul, 2021	Turkey	12	Children	QE	9 - 12	Anxiety-Coping Program for Children	Cognitive Behavioural	Group	Special.	School	Anxiety
Naderi, 2019	Iran	22	Children	QE	8 – 11 (girls)	Exercise training protocol	Physical activity	Group	NR	Not stated	Anxiety
Nasab, 2015	Iran	30	Children	QE	5 - 7	Sand Play Therapy	Play	Not	NR	Clinic/health facility	Separation anxiety
Obiweluzo, 2021	Nigeria	178	Children	RCT	6 - 12	Cognitive Behavioural Play Therapy	Cognitive Behavioural & Play	Group	Special.	School	Social anxiety
Özyurt, 2016 & 2019	Turkey	55	Parents	RCT	8 - 12	Triple P Group	Parenting skills training	Group and individual	NR	University	Anxiety
Ramdhonee-Dowlot, 2021	Mauritius	100	Children	RCT	9 - 14	Super Skills for Life	Cognitive Behavioural	Group	Special.	Residential Care Institution	Anxiety, Depression,

											Behaviour, Hyperactivity
Sang, 2018	China	26	Children	RCT	9-12	Social skills training program	Social skills training	Group	NR	Clinic/health facility	Internal. Symptoms
Sevi Tok 2016	Turkey	45	Both	RCT	8-12	Fear Hunter	Cognitive Behavioural	Individual	Special.	Clinic/health facility	Anxiety
Interventions targeting multiple outcomes (8 studies)											
Daryabeigi, 2020	Iran	32	Both	RCT	7 - 10 (boys)	Coping Cat Program	Cognitive behavioural	Group	NR	NR	Internal. & External. symptoms
Dorsey, 2020	Kenya & Tanzania	640	Children	RCT	7 - 13	Trauma focused CBT	Cognitive behavioural	Group & Individual	Non-Sp	NR	PTS, grief, external. & internal. symptoms
Jordans, 2010	Nepal	325	Children	RCT	11 - 14	Classroom based intervention	Cognitive behavioural, Expressive	Group	Non-Sp.	School	PTS, internal., external., social, functioning
Jordans, 2013	Burundi	120	Parents	QE	10 - 14	Brief parenting psychoeducation intervention	Psychoeducation, Parenting skills training	Group	Non-Sp.	School	Depression, Aggression
Matta, 2021	Brazil	60	Children	QE	6 - 10	Sand Play Therapy	Play	Individual	Special.	Community	External. & internal. behaviours
Tol, 2008 & 2010	Indonesia	403	Children	RCT	7 - 15	Classroom Based Intervention	Cognitive behavioural, Expressive	Group	Non-Sp.	School	PTS, internal., external., social, functioning.
Tol, et al., 2012	Sri Lanka	397	Children	RCT	9 - 12	Classroom Based Intervention	Cognitive behavioural, Expressive	Group	Non-Sp.	School	PTSD, depression, and anxiety
Tol, et al., 2014	Burundi	329	Children	RCT	8 - 17	Classroom Based Intervention	Cognitive behavioural, Expressive	Group	Non-Sp.	School	PTSD, depression, and anxiety

Traumatic stress presentations (9 studies)											
Amin, 2020	Pakistan	75	Children	RCT	7 - 13	Support for Students Exposed to Trauma	Cognitive Behavioural	Group	Special.	School	PTS symptoms, Resilience, Social support
Catani, 2009	Sri Lanka	31	Children	RCT	8 - 14	KIDNET (Narrative Exposure Therapy for Children) versus Meditation-Relaxation	Cognitive Behavioural	Individual	Teacher	Provisional camp	*PTS symptoms & Adaptive functioning
Dawson, 2018	Indonesia	64	Both	RCT	7 - 14	Trauma focused CBT versus Problem Solving	Cognitive Behavioural & Problem Solving	Individual	Non-Sp.	School (after school programme)	*PTS & Depression symptoms, Anger
El-Khani 2021	Lebanon	119	Both	RCT	9 - 12	Teaching Recovery Techniques plus parenting component	Cognitive Behavioural & Parent Skills Training	Group	Teacher	School	PTS, Depression & Anxiety symptoms
Hamidi, 2021	Iran	40	Children	QE	9 - 12 (boys)	Psychodrama therapy	Psychodrama	Group	NR	School	PTS symptoms & diagnosis
Lesmana, 2009	Indonesia	226	Children	QE	6 - 12	Spiritual hypnosis assisted therapy	Hypnosis	Group	Special.	NR	PTS symptoms & diagnosis
Murray, 2015 Kane, 2016	Zambia	257	Both	RCT	5 - 18	Trauma focused CBT	Cognitive Behavioural	Individual	Non-sp	Mixed	PTS Symptoms, adaptive functioning
Pityaratstian, 2015	Thailand	36	Children	RCT	10 - 15	Teaching Recovery Techniques (adapted)	Cognitive Behavioural	Group	Special.	School	PTS symptoms
Thabet, 2005	State of Palestine (Gaza)	111	Children	QE	9 - 15	Crisis intervention	Critical incident stress management	Group	Special.	School (summer camp)	*PTS and Depression symptoms

Note:

*no significant between group effects; ADHD, attention deficit hyperactivity disorder; Non-Sp, non-specialist; NR, Not reported; OCD, Obsessive Compulsive Disorder; PTS, Post traumatic stress; QE, quasi-experimental design; RCT, randomised controlled trial; Special., Specialist; Trainee, trainee in clinical psychology

Box 1: Key findings from the review**Internalising symptoms:**

- CBT interventions show promise in reducing internalising symptoms, particularly in older children and early adolescents.
- Play-based approaches have been used with younger children, but strong evidence is lacking.
- Group-based interventions have shown promising results, but there is no conclusive evidence finding differences between individual, group, or family-based delivery.
- Training parents to deliver CBT or emotion coaching to young children may be effective, but further research is needed on optimal involvement of caregivers.
- Promising components may include problem-solving, psychoeducation, mindfulness, in-session exposure, social skills and cognitive strategies.
- There is limited evidence for non-specialist approaches in LMICs.

Externalising symptoms:

- Limited evidence exists for interventions targeting externalising symptoms, and we found no evidence for non-specialist approaches in LMICs and humanitarian settings.
- Parenting programmes targeting behavioural management strategies show most promise
- Additional of relationship enhancement strategies may be beneficial.
- Group-based child-focused interventions (including play, CBT, problem solving) may be considered for children 9 and above, but require further study.
- Caregiver involvement is important, especially for younger children. with both caregivers involved where possible.

Traumatic stress symptoms:

- There have been few high quality studies for interventions targeting traumatic stress in young children in LMICs, especially delivered by non-specialists.
- There are mixed findings regarding treatment content with some studies showing equivalent effects between different active interventions.
- Trauma-focused CBT approaches have the most evidence, both in group and individual formats.
- Involvement of caregivers is important.
- The impact of CBT interventions on other symptoms is not well understood.

Combined outcomes:

- There are few studies targeting a combination of outcomes delivered by non-specialists in LMIC and these have shown mixed results.
- Global evidence is mixed for cross-diagnostic impacts of interventions.
- Group-based cognitive-behavioural interventions may be effective for children as young as 7 years but further research is needed to determine which interventions work best for different sub-groups.

Key implementation considerations:

- Flexibility in intervention packages is important to address the diverse needs and developmental stages of children and families in these settings.
- Schools and kindergartens can serve as important entry points for intervention, but further research is needed on school-based delivery, and efforts should also reach out-of-school children.
- Further research is needed on training and supervision needs, as well as real-world implementation and quality assurance.
- Screening should encompass a broad range of emotional and behavioural challenges, considering cultural and contextual factors.

Figure 1:

Individual studies identified from low and middle income countries (Strategy 1)

