Child and Adolescent Mental Health

Child and Adolescent Mental Health 26, No. 3, 2021, pp. 238–251 doi:10.1111/camh.12416

Review: The effectiveness of Theraplay for children under 12 – a systematic literature review

Rebecca Money, Sarah Wilde & David Dawson

School of Psychology, Doctorate in Clinical Psychology (DClinPsy), University of Lincoln, Lincoln, UK

Background: Theraplay is a relationship-focused model of treatment based on attachment theory involving both adult and child. The study aims to review the quality of Theraplay research and Theraplay's effectiveness for children aged 12 years and under with a range of presenting difficulties, to inform future practice and identify areas for further research. **Methods:** A systematic literature search was conducted using PsycINFO, CINAHL, MEDLINE and Web of Science. Quantitative studies using Theraplay only as a treatment for children aged 12 years and under with any presenting difficulty were identified. Additional manual searching was conducted, including eligible studies' reference lists. Critical appraisal tools were used to provide a narrative synthesis of Theraplay's effectiveness and research quality. **Results:** Only six eligible articles were identified, meaning there was a lack of rigorous evidence eligible to offer conclusions into Theraplay's effectiveness. The review highlighted the small evidence base, mixed quality research methodology and high levels of heterogeneity in how Theraplay is practiced and evaluated. Of the eligible studies, Theraplay was found promising in its effectiveness when used with internalising and externalising difficulties, dual diagnoses and developmental disabilities. **Conclusions:** Theraplay is regularly practiced across the world; however, the evidence base of rigorous research to inform Theraplay's effectiveness and mechanisms of change is lacking. Firm conclusions could not be offered, although Theraplay was shown to be promising intervention for some presentations. Further research into Theraplay's effectiveness and key mechanisms of change are recommended to enhance the quality and depth of Theraplay literature.

Key Practitioner Message

- Theraplay is an attachment-based intervention used within services across the world. Theraplay supports young people with various presentations and their family/care systems. Despite Theraplay's wide use, very little is known into its effectiveness and key mechanisms of change.
- The current evidence of Theraplay's effectiveness is based on a small number of studies, including high levels of heterogeneity of the articles and poor quality methodology at times. Therefore, generalisability of the findings was difficult.
- Firm conclusions into Theraplay's effectiveness could not be established. Within the few studies included, Theraplay was shown to be a promising intervention for children presenting with internalising and externalising difficulties, dual diagnoses and developmental disabilities. Less promising evidence was seen for social and emotional difficulties with looked after children.
- More high quality and rigorous research is needed to fully establish the efficacy and effectiveness of Theraplay for children with various presenting difficulties, contributing to services use of evidence-based practice.

Keywords: Behaviour problems; emotional dysregulation; mental health; play therapy; parent–child interaction

Introduction

Theraplay[1] is an 'engaging, playful, relationship-focused treatment method that is interactive, physical and fun... based on attachment theory' (Booth & Jernberg, 2009, p.xxi). Theraplay is used across countries and services for various presenting psychological difficulties and populations, including developmental disorders (e.g. autistic spectrum disorders), attachment difficulties (including fostered or adopted children), trauma and regulation difficulties (both emotional and behavioural; Booth & Jernberg, 2009; Munns, 2009; Wettig, Franke, & Fjordbak, 2006).

Theraplay is informed by attachment theory and the work of Bowlby (1973), particularly the concept of internal working models. Children who experience pleasurable and attentive interactions with their caregivers develop a 'healthy' internal working model. Children view themselves, their parents (in turn others) and the world in a positive manner. Children with healthy internal working models develop a degree of safety; learning to explore their environment whilst knowing that the security of their parent will be there if needed. The Theraplay model hypothesises that children who have been neglected from these interactions are more likely to develop problem behaviours and relationship difficulties

Published by John Wiley & Sons Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK and 350 Main St, Malden, MA 02148, USA

(Booth & Jernberg, 2009). The rationale for Theraplay, therefore, is to offer the child and parent new positive interactions based on healthy and secure parent–infant attachments (Booth & Jernberg, 2009). Sessions aim to enhance the child's internal working model and in turn, any problematic feelings and behaviours.

Theraplay differs in its application in comparison with typical Play Therapy. Play Therapy typically involves the child only, and play is used to explore the child's thoughts or feelings (e.g. in their choice of toy or play). Alternatively, Theraplay sessions involve both adult and child use the relationship to create change (Booth & Jernberg, 2009). Sessions focus on the 'here and now' interactions and not the child's past or present experiences (Theraplay Institute, 2017c). Theraplay is based on structured sessions underpinned by the four core concepts implemented through 'games'. Sessions provide the opportunity for the child to (a) engage in an attuned connection (engagement), (b) a basis of safety (structure) and (c) the opportunities to experience mastery (challenge) and (d) feel worthy and cared for (nurture). Sessions follow a set structure (Booth & Jernberg, 2009) and begin with games that implicitly communicate that the adults are excited to see them and reconnect between sessions (e.g. a 'check in'). The bulk of the session facilitates a combination of games based on the four concepts (e.g. playing 'slippery slip' with lotion [nurture] or 'balloon tennis' [challenge]). Sessions end with a transition back into everyday life, acknowledging the time they have all spent together. Theraplay sessions are designed to recreate early parent–child exchanges that would have typically occurred at an early age. Sessions go back to the original relationship that stems on the development on an internal working model (Munns, 2000). Sessions aim to support the key adult in providing face-to-face, positive, playful and responsive interactions (Booth & Jernberg, 2009) whilst enabling the development of a more positive internal working model for the child (Booth & Winstead, 2016).

Attachment theorists propose that the attachment between primary caregiver and child acts as a dyadic regulation of emotion (Schore, 2000, 2001, 2005). The child's early experiences of emotion management are important in supporting the development in self-regulation skills, transitioning from parental coregulation to child self-regulation. The development of self-regulation is an important aspect of the child's ability to develop good social skills (Gerhardt, 2004). Theraplay sessions promote the development of self-regulation using a combination of up- and downregulating games (Munns, 2009), alongside the multiple opportunities for coregulation by adults (first the therapist to parent/carer, then parent/carer to child; Booth & Jernberg, 2009).

When implementing therapeutic models within services, it is important to consider and critically appraise its evidence base. Theraplay advertises their inclusion on the Substance Abuse and Mental Health Service Administration (SAMHSA, n.d.) National Registry for Evidence-based Programs and Practices. SAMHSA categorises Theraplay as 'effective' for internalising problems, and 'promising' for Autism Spectrum Disorder and Symptoms. Yet only two studies contribute to these results of effectiveness (Siu, 2009, 2014). One previous paper attempted to review the effectiveness of Theraplay for older children with attachment difficulties (Brayman, 2016). The review consisted of 11 peer-reviewed studies and concluded that Theraplay can be effective intervention to enhance change within childhood attachment (Brayman, 2016). However, several criticisms of the review weaken the validity of Brayman's (2016) claim. The review lacked systematic quality appraisal and involved a high degree of heterogeneity of the methodological design of studies, making it difficult to draw firm conclusions. The review also had levels of variability in how attachment was operationalised and measured. Most studies utilised methods of assessment that primarily assessed the nature and quality of parent–child interactions, rather than focusing solely on attachment security (Lindaman, Booth, & Chambers, 2000), and only one study utilising specific measures of attachment (Mahan, 1999).

Qualitative approaches have identified that practitioners, professionals and carers view Theraplay as being effective. Hong's (2014) study identified themes of Theraplay helping to build connections, decrease anxiety and depression, increase regulation and decrease aggression and 'temper tantrums'. The effectiveness of Theraplay with other presenting difficulties has also been reported, often via Theraplay newsletters (Theraplay Institute, 2017a). However, these were based on verbal accounts with no quantitative measures applied to monitor effectiveness objectively.

When establishing the utility of therapeutic models of intervention in clinical practise, it is helpful to draw upon the current evidence base to integrate information on efficacy. Salkovski's (1995) 'hourglass model' is a three-stage evaluation process during the clinical development of psychological intervention. The first stage involves the use of smaller samples and flexible methodological designs, followed by expanding to more stringent methodological strategies to assess efficacy and mechanisms of change, for example randomised control trials (RCTs). Finally, broadening any promising results to assess wider clinical utility.

Despite Theraplay's worldwide and broad use with various clinical presentations, a detailed systematic review is yet to be conducted to draw together the effectiveness of the model and the quality of current research. The current systematic literature review aims to establish the effectiveness of Theraplay for children with various presenting difficulties, using the 'hourglass model' of clinical development as a framework.

Aims

The aims of the current systematic literature were to:

1 establish how the attachment-focused model of Theraplay is being applied to all presenting difficulties for children aged 12 years and under;

2 assess the effectiveness of Theraplay for children aged 12 years and under, for children presenting with various difficulties;

3 provide a critical account of the summary of the results and the current literature, using a narrative review.

Methods

The systematic literature review was registered with PROSPERO, registration number CRD42018104461. The review was

consistent with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009).

Search strategy

A search was conducted on: PsycINFO, CINAHL, MEDLINE and Web of Science. Each database was individually searched for studies published in English and between 1970 to July 2019. Reference lists of eligible full-text papers were also manually searched, alongside the recent Theraplay manual (Booth & Jernberg, 2009) and Theraplay Institute website (Theraplay Institute, 2017b). For any missing studies, contact was made with the Theraplay Institute alongside the use of interlibrary loans to enable completeness of the search (Petticrew & Roberts, 2005).

There were a limited number of publications into Theraplay interventions. Following advice from an independent librarian, a specificity search was chosen due to the high volume of unsuitable papers included when combining the keyword of 'Theraplay' and the Medical Subject Heading (MeSH) of 'Play Therapy'. As outlined earlier, Theraplay and Play Therapy vary significantly in their approach and key mechanisms, which are further outlined by The Theraplay Institute (Theraplay Institute, 2017c). Therefore, it was felt that a study using the Theraplay treatment model should be explicit of its use of 'Theraplay' within the text. The search process was therefore broadened by searching the full text of studies and not restricting to abstracts and titles. All databases were searched using the free text Theraplay AND Child* (truncation for words including child, children, childhood). Table 1 presents the inclusion and exclusion criteria for the current systematic literature review, including a rationale for criteria.

Studies within the Theraplay manual (Booth & Jernberg, 2009) were manually searched via titles only. Any eligible studies found via searching titles were then subject to a full-text search.

Data abstraction

Data extracted from eligible articles included country, study design, population, sample size, range and average age of child, gender ratio, Theraplay treatment format, child–adult relationship in Theraplay, standardised measure used, who completed the measure, average number of sessions and frequency of sessions. Please refer to Table 2 for all abstracted data. Studies with mixed methodology only focused on the quantitative data.

Quality assessment

Meta-analyses and RCTs are deemed the most rigorous in design (Roth & Fonagy, 2005). However, the methodological quality of any study is not to be assumed. Quality assessment enables the reader to establish whether the study provides confidence in its design and conduct (Boland, Cherry, & Dickson, 2014). No gold standard or recommended critical appraisal tool (CAT) of assessing quality and bias is available (Sanderson, Tatt, & Higgins, 2007). Nevertheless, the use of any CAT rather than none is recommended (Voss & Rehfuess, 2012). The Joanna Briggs Institute (JBI) tools were chosen for the current review due to the range of study formats available, including case series (Moola et al., 2017), quasi-experimental designs and RCTs (Tufanaru, Munn, Aromataris, Campbell & Hopp, 2017). Each tool was adapted to allow for additional quality appraisal checks relevant to the current study. Studies were assessed using the responses 'yes', 'no' or 'unclear'. All three authors independently coded each article to provide interrater reliability of the quality assessment.

Results

Of the original 534 studies identified (minus duplications), only six articles (seven studies) were eligible for review. A narrative review of study characteristics, study quality and key findings shall be provided. A meta-analysis could not be completed due to the heterogeneity of participants, outcome measures and time frames (Boland et al., 2014).

Selection method

An overview of the search strategy is outlined in Figure 1. Initial searches (via electronic databases, the Theraplay Manual (Booth & Jernberg, 2009) and

Table 1. Inclusion and exclusion criteria for study selection process

	Rationale
Inclusion Criteria	
Average age of child in study to be 12 years old or under, either male or female	To build on the review by Brayman (2016), and Theraplay's nonverbal modality and therefore use with infants and toddlers
Study to contain the word 'Theraplay' as specific model of therapy offered	To establish the specific model of Theraplay is being used within the study, as recognised and accredited by the Theraplay Institute.
Use of outcome using a psychometric measure, quantitative study	To establish empirical investigation of the phenomena in question (i.e. presenting problem, Theraplay) and their relationship.
To be written in English	Due to constraints of the study and being unable to translate.
All experimental study designs (including quasi-experimental designs)	To capture a broader range of quantitative research, which can then be quality appraised
In a peer-reviewed journal	Minimum quality threshold
Studies published after 1970	The year the Theraplay Institute was established.
Exclusion Criteria	
Dissertations/Theses	Not peer reviewed, with less scientific rigour.
Studies published in other formats: Books (including full books, chapters or reviews), Conference papers/abstracts, Films, Magazines, Newspapers, Newsletters.	Not peer reviewed, with less scientific rigour.
Other play model used, for example Filial Therapy, Play Therapy	These models not being recognised or attributed to the Theraplay model, as accredited by the Theraplay Institute.
Theraplay combined with another approach (e.g. Dyadic Developmental Psychotherapy)	Difficulties in distinguishing the mechanisms of change, and whether this is specifically due to Theraplay or the other model of combined choice.
Use of 'Sunshine Circles' Theraplay model	'Sunshine Circles' designed to use for teaching staff and classroom management. The leaders of these groups are not therapists and not providing therapy (Booth & Jernberg, 2009), therefore excluded from review due to a difference in model and rationale.

Table 2. Study characteristics for eligible studies

Author(s), Year, Country	Methodology	Sample Characteristics	Intervention Characteristics	Summary of Results
1) Bojanowski, J. J., & Ammen, S. (2011) Canada	*Quantitative.* Case series Pre/postdata, no follow-up Inferential statistics	*Setting:* Private outpatient clinic *Presenting difficulty:* Internalising/Externalising difficulties *Sample Size:* 11 parent–child dyads (8 children in total) *Age:* Mean = 6.55 years (SD = 1.63), Range = 5-9 years *Gender:* Female (n = 5), male (n = 3).	*Treatment Type:* 1:1 *Assessment:* MIMRS (O'Connor, Ammen, Backman & Hitchcock, 2001); CBCL (Achenbach & Rescorla, 2001) *Session No:* Minimum 8 (range or mean not reported) *Frequency of sessions:* Not reported.	• *CBCL*: Decline in externalising problems* (d = 0.72), total problems** (d = 1.14) and internalising problems** (d = 1.10) post-Theraplay • *MIMRS:* Improvement in total scores* (d = 1.07) post-Theraplay, alongside parents use and childs response to nurture** (d = 1.50) and challenge* (d = 0.76). No significant change found for structure and engagement scale, alongside separation task (p > .05)
2) Francis, Y. J., Bennion, K., & Humrich, S. (2017) UK	*Mixed Methods* Case series Pre/postdata, no follow-up Inferential statistics	*Setting:* School/Home *Presenting difficulty:* LAC, social and emotional difficulties *Sample Size:* 40 (20 LAC, 20 non-LAC) *Age:* Range 5-11 years (no mean data) *Gender:* Female (n = 11), male (n = 9).	*Treatment Type:* 1:1 and group (child and significant adult in school, e.g. teacher, behaviour mentor) *Assessment:* SDQ (Goodman, 1997) *Session No:* Group: 4-16 sessions, 1:1 12-18 sessions *Frequency of sessions:* Weekly, 30 minutes each.	• *Combination of 1:1 and Group:* No statistically significant change on all scales of the SDQ (p > .05), including emotional, hyperactivity, conduct, peer problems, prosocial and total • *1:1 intervention:* No statistically significant change on all scales of the SDQ (p > .05), including emotional, hyperactivity, conduct, peer problems, prosocial and total • *Group:* No statistically significant change on all scales of the SDQ (p > .05), including emotional, hyperactivity, conduct, peer problems, prosocial and total • *Differences between group and 1:1 scores:* Significant differences between pre- and posttotal scores, hyperactivity and conduct problems, and prosocial behaviours. A significant difference between postonly peer problems. No significant differences between emotional pre- and postscores, alongside peer problems prescores only (p > .05). No p values given

(continued)

Table 2. (continued)

Author(s), Year, Country	Methodology	Sample Characteristics	Intervention Characteristics	Summary of Results
3) Hiles Howard, A. R., Lindaman, S., Copeland, R., & Cross, D. R. (2018) USA	*Quantitative.* Case series Pre/Postdata, 3 months follow-up Inferential statistics	*Setting:* Unclear *Presenting difficulty:* ASD, relationship difficulties *Sample Size:* 8 parent–child dyads *Age:* Mean = 5.38 years (SD = 1.92), Range 3-9 years *Gender:* Female (n = 6), male (n = 2)	*Treatment Type:* 1:1 *Assessment:* Adapted MIM scoring from McKay, Pickens, and Stewart (1996), parent/child sheets. Changes only monitored in session, not out of session *Session No:* 19 *Frequency of sessions:* 2 x 1 hour daily for two weeks (first day only one session)	• *Pre-, post- and follow-up:* Significant differences between child's positivity*, eye contact* and acceptance of guidance* towards parent. No significant difference between child's affect, proximity, responsivity and task focus (p>.05) • Significant differences in parent facial expression and affect*, response to behavioural cues*, eye contact towards child* and offering of guidance*. No significant differences between parent's positivity and proximity (p > .05) • No differences within the dyad scale for social and balance (p > .05) • *-Time Points:* Session 1-5 (time point 1), 6-10 (2), 11-16 (3) and 16-19 (4). Scores improved as sessions increased over time on parent domain* [including facial expression and affect*, encouragement*, response to behavioural cues* and offering of guidance*] and child domain* [including positivity*, body positioning towards parent* and acceptance of guidance*]. No significant differences were found between session numbers on the parent domain of proximity (p > .05) and child domain of affect, responsivity and task focus (p > .05) • No exact p values given. Unable to compute effect sizes due to missing data
4) Siu, A. F. Y. (2009) China	*Quantitative.* RCT No follow-up data Inferential statistics	*Setting:* School *Presenting difficulty:* Internalising problems (t-score above 63 on the CBCL, Achenbach et al., 2001) *Sample Size:* 46 (TG = 22, WC = 24) *Age:* TG: Mean = 7.84 (SD = 1.32), WC: Mean = 7.89 (SD = 1.32) *Gender:* Female (n = 21), male (n = 25). TG: 56% female, WC: 54% female.	*Treatment Type:* Group *Assessment:* CBCL (Achenbach et al., 2001) *Session No:* 8 sessions *Frequency of sessions:* Weekly, 40 minutes	• Mean scores within Theraplay TG significantly decreased postintervention** with large effect (d = 1.19), compared with the CG. No exact p values given

(continued)

Table 2. (continued)

Author(s), Year, Country	Methodology	Sample Characteristics	Intervention Characteristics	Summary of Results
5) Siu, A. F. Y. (2014) China	*Quantitative*. RCT No follow-up data Inferential statistics	*Setting:* School *Presenting difficulty:* Developmental Disabilities, social skills (47% mild ID, 53% moderate ID) *Sample Size:* 38 (TG = 23, WC = 15) *Age:* Mean = 10.34 (SD = 1.95), Range 6-13 years *Gender:* Total participants: Female (n = 3), male (n = 35).	*Treatment Type:* Group *Assessment:* SRS (Constantino et al., 2003) *Session No:* Minimum 20 (no data on mean or range) *Frequency of sessions:* Weekly, 30 minutes	• Significant difference on the social communication scale* (d = 0.78) when comparing TG and CG. No other significant differences on the social awareness, social cognition or social motivations scales (p > .05) • Changes in pre-post scores subscales for TG found significant changes with small effect for social awareness** (d=.25), social cognition** (d=.28), social communication** (d=.36), social motivation** (d=.09) • No reported changes in pre-post SRS subscales (social awareness, social cognition, social communication and social motivation) for the WC (p > .05)
6a) Wettig, H. H. G., Coleman, A. R., & Geider, F. J. (2011) Germany	*Quantitative*. Controlled longitudinal study (quasi-experimental) Pre/postdata, 2-year follow-up Inferential statistics	*Setting:* Medical centre, therapy rooms *Presenting difficulty:* Dual diagnosis of language disorder and shyness/social anxiety (diagnosed by Speech Pathologist) *Sample Size:* 52 (TG = 22, CG = 30) *Age:* TG: Mean = 4.1 (SD = 1.1). CG: Mean = 4.6 years (SD = 1.35) *Gender:* TG: Female (n = 8), male (n = 14)	*Treatment Type:* 1:1 *Assessment:* CASCAP-D (Döpfner, Berner, Flechtner, Lehmkuhl, & Steinhausen, 1999) *Session No:* Mean = 18, maximum 66 (no minimum data) *Frequency of sessions:* Not reported, 30-45 minutes.	• Significant difference following Theraplay compared to control group at post-treatment, for difficulties with attention*** (d = 1.08), expressive*** (d = 2.30) and receptive*** language problems (d = 1.83), cooperation* (d = 0.56) and being socially withdrawn* (d = 0.57). No significant differences for shyness, conformity and mistrust were found (p > .05) • *TG:* Significant difference post-Theraplay in several areas including; shyness*** (d = 2.35), attention deficit** (d = 0.58), poor cooperation** (d = 0.79), conformity*** (d = 1.89), social withdrawal* (d = 0.77), mistrust* (d = 0.63) and receptive language problems** (d = 0.73). No significant differences were found for low self-confidence and expressive language problems (p > .05) • A significant change was also found between pre and 2-year follow-up for the above difficulties, alongside a significant change in expressive language disorder* (d = 1.10). There continued to be no significant differences for low self-confidence (p > .05). Effect sizes ranged from medium to large, with differences in mistrust having the smallest effect (d = 0.63, p < .05), and shyness the largest (d = 2.15, p < .001) • No exact p values given. Effect sizes not reported, calculated by researcher

(continued)

Table 2. (continued)

Author(s), Year, Country	Methodology	Sample Characteristics	Intervention Characteristics	Summary of Results
6b) Wettig, H. H. G., Coleman, A. R., & Geider, F. J. (2011) Germany and Austria	*Quantitative*. Multicentre case series Pre/postdata, no follow-up data Inferential statistics	*Setting:* Medical centre, therapy rooms *Presenting difficulty:* Dual diagnosis of language disorder and shyness/social anxiety (diagnosed by Speech Pathologist) *Sample Size:* 167 parent–child dyads *Age:* Mean = 4.5 years (SD = 1.1) *Gender:* Female (n = 60), male (n = 107)	*Treatment Type:* 1:1 *Assessment:* CASCAP-D (Döpfner et al., 1999) *Session No:* Mean = 18, Maximum 55 (no minimum data) *Frequency of sessions:* Not reported, 30-45 minutes.	• Posttreatment, using the CG results from 6a, there were no significant differences between TG and CG for shyness, attention difficulties, poor cooperation, conforming and mistrust ($p > .05$). Significant differences were found between the TG and CG for social withdrawal* ($d = 0.60$), low self-confidence** ($d = 0.76$), expressive*** ($d = 1.51$) and receptive language disorder*** ($d = 0.52$) • *TG:* All variables significantly changed between pre and posttherapy for the TG*** with medium to large effect. Expressive language was found to have the least meaningful effect ($d = 0.60$) compared to shyness ($d = 2.13$) • No exact p values reported. Effect sizes not reported, calculated by researcher • Similar results were found in the current study (6b) as the previously controlled study (6a)

ASD, Autistic Spectrum Disorder; CASCAP-D, Clinical Assessment Scale for Child and Adolescent Psychopathology; CBCL, Child Behavior Checklist; CG, Control group; ID, Intellectual Disabilities; LAC, Looked after children; MIMRS, Marschak Interaction Method Rating System; SDQ, Strengths and Difficulties Questionnaire; SRS, Social Responsiveness Scale; TG, Treatment group; WC, Waitlist control.

For quantitative studies the following significance indicators are used: *$p < .05$; **$p < .01$; ***$p < .001$. All reported effect sizes were reported or have been converted to d to facilitate comparisons, d values indicate $d = 0.2$ (small), 0.5 (medium), 0.8 (large), (Cohen, 1988).

1:1 Theraplay sessions typically involve one child, parent/carer and therapist. For studies with mixed methods, only quantitative data has been included. Article six has been split into two (6a, 6b) as the same article describes two different studies.

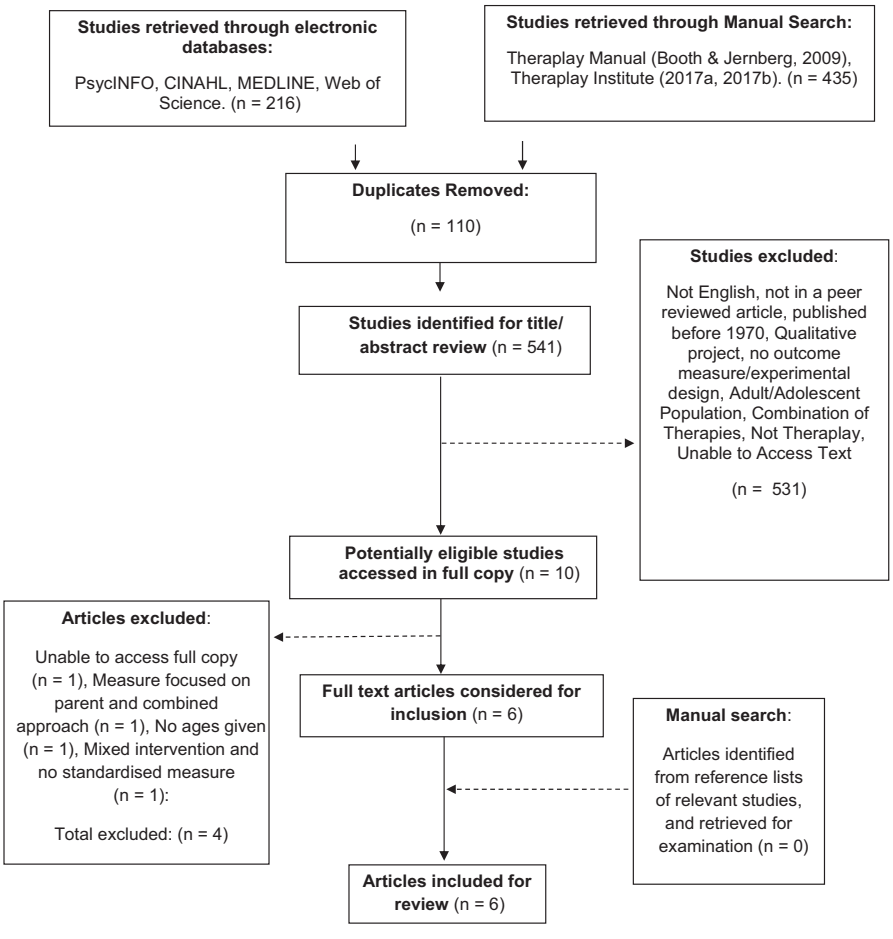

Figure 1. PRISMA diagram showing study selection process

Theraplay Institute website, 2017a,b) identified 651 potentially relevant studies. A total of 110 studies were removed due to duplication, with 541 studies remaining. Each of these citations were screened by one reviewer to identify studies that did not meet inclusion criteria.

One hundred and fifty-three of the identified studies were removed as they were not in English, leaving 388 potential studies. A further 378 studies were excluded; 71.4% were published in a nonpeer review format, and 7.14% used an alternative model to Theraplay (e.g. Play Therapy, Filial Therapy). A full breakdown of each of the exclusion criteria met is in Table S1. Ten studies were eligible for full-text review; however, four were excluded (see Figure 1 for breakdown).

Attempts were made to source any missing studies via electronic searches, Librarians at the local university, Interlibrary loans and the author's (RM) contact with the Theraplay Institute. Despite exhaustive attempts, fifteen studies were removed as they were unable to be sourced.

Six articles were obtained and deemed eligible in the final review. One of these articles was written and published as one article (Wettig, Coleman, & Geider, 2011), yet reported two studies (a controlled longitudinal study and a multicentre study). These studies have been separated for the current review. For ease, eligible studies shall be referred to by numerical values (between 1 and 6b) for the remainder of the review. These are tabulated in Table 2.

Only one study from the previous Brayman (2016) review was found to be eligible in the current review (Bojanowski & Ammen, 2011). Eligibility criteria for the current review excluded several studies from Brayman's (2016) review, including, studies not being publishing in peer-reviewed journals (Booth & Winstead, 2015; Mahan, 1999; Mason, 2007; Myrow, 2016), a qualitative project (Hong, 2014), studies integrating their intervention (Weir, 2007; Weir et al., 2013), recruiting a participant older than 12 (Robison, Lindaman, Clemmons, Doyle-Buckwater & Ryan, 2009) and not implementing any quantitative measures (Booth & Lindaman, 2000; Myrow-Bundy & Booth, 2009). Four of the studies included in the current review were published in the wider literature but not included within Brayman's (2016) review (Francis, Bennion, & Humrich, 2017; Hiles Howard, Lindaman, Copeland, & Cross, 2018; Siu, 2009, 2014; Wettig et al., 2011).

General characteristics

Studies were conducted in various countries across the world. Participant sample sizes ranged from 8 to 167, with 63% of participants male with a mean age range (where reported) of 4.1 to 10.34 years. Most participants were male (male = 195, female = 114).

The most common study design was case series designs using pre-post measures (1, 2, 3, 6b). Two studies utilised RCT (4, 5). Table two presents the high levels of variability between studies, including, the setting Theraplay was implemented (e.g. home or school), the key adult involved (e.g. parent or teacher), the frequency of sessions (e.g. daily or weekly) and whether sessions

were 1:1 or group. Where reported, the mean number of sessions ranged between 8 and 19 sessions, with a reported range of 4-66 sessions. Clinical heterogeneity of how Theraplay interventions are delivered is evident and subsequently impacts the ability to draw accurate conclusions (Gagnier, Moher, Book, Beyene & Bombardier, 2012). Results from the current review will be based on using narrative synthesis and relating this to the population, intervention, comparison and outcome (PICO), as recommended when clinical heterogeneity is present (Gagnier et al., 2012).

Quality appraisal results

All seven studies (six articles) were quality appraised by all three authors. Interrater reliability, using Fleiss' kappa, found a 'substantial agreement' (kappa = 0.63) between authors as informed by Landis and Koch's (1977) criteria. Results from each of the CATs are tabulated in Tables 3–5, with the majority quality appraisal presented.

One study acknowledged no affiliation with the Theraplay Institute in their article (2), with three of the studies seen to have some association with the Theraplay Institute (3, 6a, 6b). None of the studies reported who had funded the research. Overall, this variance in reporting places the studies at risk to researcher and funding bias.

Mixed results were found in how studies reported the procedure and typical session of the Theraplay intervention, with Group Theraplay studies applying this better (2, 4, 5). An example session plan was only provided by one study (5). Theraplay recommends the transition of key adults into the Theraplay sessions (Booth & Jernberg, 2009). However, studies were inconsistent on reporting how the transition was managed. Some studies reported that this transition occurred (4, 6a, 6b) with only one study being clear on the duration of the adult's participation in sessions and that the child did not participate in all sessions offered (3). This fluctuation and lack of clarity comprises the studies validity and reliability.

Only one study (1) measured change between the four core concepts of Theraplay (structure, challenge, nurture and engagement). Studies explanations of how the child's presenting problem was related to the attachment theory underpinnings of Theraplay were not always clear and fully established. Studies also varied in their assessment measures, with self-report measures (completed by key adults involved) frequently used (1, 2, 4), which enhances the likelihood of reporting bias.

Most studies used appropriate statistical analysis. Three studies did not report effect sizes (2, 6a, 6b). Missing effect sizes were calculated by the researcher for the purpose of the systematic review. The small sample sizes in some studies and one study's multiple use of the same data (2) increased the risk of type 1 error.

Table 3. Quality Appraisal using Critical Appraisal Tool (Moola et al., 2017): Case series

Study	1	2	3	6b
Clear inclusion criteria	Y	N	N	U
Identification of presenting problem clear	U	U	U	U
Valid measure of presenting problem/specialist service	U	N	U	Y
Consecutive inclusion of participants	U	N	N	N
Complete inclusion of participants	U	N	N	N
Demographics clearly reported	U	Y	U	Y
Clear description of Theraplay	N	Y	U	Y
Therapist Theraplay trained	U	U	Y	Y
Standardised outcome measure	U	U	N	U
Theraplay four concepts measured	Y	N	N	N
Outcomes/follow-up results reported	U	U	U	Y
Appropriate statistical analysis	Y	Y	U	Y
Presenting difficulty related to Theraplay theory	U	U	U	U

N, No; U, Unclear; Y, Yes.
Yes, the study clearly provides a rich description of item; No, little information is provided to be able to adequately assess this item; Unclear, full or partial missing information, therefore unable to fully assess whether it addresses the item.

Table 4. Quality Appraisal using Critical Appraisal Tool (Tufanaru et al., 2017): Quasi- experimental designs

Study	6a
Clear 'cause' and 'effect'	Y
Valid measure of presenting problem/specialist service	Y
Participants in comparison similar	N
Participants in comparison receiving similar treatment	N
Control group	U
Demographics clearly reported	Y
Clear description of Theraplay	Y
Therapist Theraplay trained	Y
Standardised outcome measure	U
Theraplay four concepts measured	N
Pre/postmultiple measurements	N
Follow-up complete or described/analysed	U
Same outcome measurements in comparison	N
Appropriate statistical analysis	Y
Presenting difficulty related to Theraplay theory	U

Y, Yes; N, No; U, Unclear.
Yes, the study clearly provides a rich description of item; No, little information is provided to be able to adequately assess this item; Unclear, full or partial missing information, therefore unable to fully assess whether it addresses the item.

Hourglass model

Despite the inclusion criteria being narrow in areas to enhance the quality of studies included (i.e. peer-reviewed journal articles), the criteria were broad in others (e.g. children aged 0–12 years with any presenting difficulty). Despite this, only seven studies were included within the review. The small number of studies raises questions in relation to the 'hourglass model' of psychological intervention and what evidence current services are basing their decisions on when implementing Theraplay, given the small number of studies included.

Randomised control trials. Randomised control trials (RCTs) are deemed to be one of the most rigorous research designs (Roth & Fonagy 2005). Two RCTs were included in the review (4, 5). Both studies lacked information about the process of randomisation, how the control group postmeasures were collected (4, 5), and differences between the control and treatment groups (5). The inclusion of only two RCTs also raises doubt whether the true effectiveness of Theraplay has been determined to broaden its use within the 'hourglass model' (Salkovski, 1995).

Case series/quasi-experimental design. Studies implementing a case series design lacked in the

Table 5. Quality Appraisal using Critical Appraisal Tool (Tufanaru et al., 2017): Randomised control trials (RCT)

Study	4	5
Valid measure of presenting problem/specialist service	Y	Y
Demographics clearly reported	Y	U
True randomisation	U	U
Treatment allocation concealed	U	U
Groups similar at baseline	Y	U
Participants blind to treatment	U	U
Clear description of Theraplay	Y	Y
Therapist Theraplay trained	Y	U
Groups treated identically	N	N
Complete follow-up	U	U
Standardised outcome measure	Y	Y
Participants analysis in allocated groups	Y	Y
Theraplay four concepts measured	N	N
Outcomes measured in the same way	U	Y
Outcomes measured in reliable way	U	U
Appropriate statistical analysis	Y	Y
Presenting difficulty related to Theraplay theory	U	U

N, No; Y, Yes; U, Unclear.
Yes, the study clearly provides a rich description of item; No, little information is provided to be able to adequately assess this item; Unclear, full or partial missing information, therefore unable to fully assess whether it addresses the item.

identification and reporting the child's presenting difficulties, alongside missing inclusion/exclusion criteria. All studies used a pre-post study design (1, 2, 3, 6a) alongside additional follow-up (6a). Whilst the multicentre case series study reported the use of a control group (6b), the data were found to be from another study dataset (6a), which raised concerns of how comparable the control group was in relation to the treatment group (e.g. recruited at a different time and country). A limitation of case series designs means that any effects found cannot be truly explained by the intervention itself. Results may have been due to other factors such as maturation of participants, information given about Theraplay, or effects of completing the measures themselves (Marsden & Torgerson, 2012). Any changes observed may have also naturally occurred without intervention.

Presenting difficulties

Significant results are reported at the recommended $p < .05$ (Dancey & Reidy, 2017), with Cohen's d effect sizes at 0.2 (small), 0.5 (medium) and 0.8 (large), (Cohen, 1988). The small number of studies, however, means that firm conclusions about Theraplay's effectiveness for the following presentations cannot be made.

Internalising (emotional) and externalising (behavioural) difficulties

Two studies found a statistically significant decline, with meaningful effect, in children's internalising difficulties following intervention (1, 4). Significant changes in children's internalising difficulties were found for both individual Theraplay (1) and group Theraplay (4), with group Theraplay being superior when compared with a waitlist control group. A significant change in total problems and externalising difficulties were also found following intervention (1), with moderately large to large effect.

Dual diagnosis. Two studies assessed Theraplay's effectiveness for children with a dual diagnosis of a language disorder and clinical shyness/social anxiety (6a, 6b). Both studies found meaningful change following Theraplay intervention. A statistically significant improvement with meaningful effect was found in attention, cooperation and levels of conformity alongside a significant decline with meaningful effect in children's levels of shyness, social withdrawal and mistrust (6a). Receptive language skills also significantly improved following intervention, with these changes maintained at two-year follow-up. Interestingly, a statistically significant change between postintervention and two-year follow-up was also found with children's expressive language skills.

When expanded to a multicentre design (6b), all areas of clinical shyness were found to statistically improve, including symptoms of attention, cooperation, levels of conformity, social withdrawal, mistrust and low self-confidence. Children's expressive and receptive language skills also significantly improved. When these results were compared with the control group results from the subsequent study (6a), although results are to be interpreted with caution, significant improvements with medium to large effect were found in children's self-confidence, expressive and receptive language skills, alongside a decline in social withdrawal.

Social and emotional needs of looked after children (LAC). No significant changes were found when using Theraplay for LAC with social and emotional needs (2) either in 1:1 or group delivery. Results may have been impacted by the chosen measures difficulties in being sensitive to change (Wolpert, Cheng, & Deighton, 2015).

Developmental disabilities. When Theraplay was implemented with children diagnosed with autistic spectrum disorders (ASD), there was a statistically significant improvement in positivity, eye contact and acceptance of guidance (3). Improvements were maintained at 3-month follow-up. No changes were found in children's observed affect, body positioning towards parent, responsivity to cues from parent and attentiveness to task. When 1:1 Theraplay intervention was broken down into four time points, children's levels of positivity, body positioning towards parent, and acceptance of guidance were found to statistically improve as the sessions progressed. No effect sizes, exact p values or standard deviations were reported to determine the effect of intervention.

Group Theraplay was found to be more effective than school lessons as usual (control group) for children with mild or moderate intellectual disabilities (5)with a small but significant effect was shown, including significant changes in children's social awareness, social cognition, social communication and social motivation.

Adult–child relationship. Few studies acknowledged or monitored changes within the adult–child relationships. Significant improvements with meaningful effect were found between parent and child within the Theraplay domains of challenge and nurture following 1:1 Theraplay (1). No significant changes within the parents use

and child's response to structure and engagement were found after the use of Theraplay.

No significant changes were found within the overall relationship when assessed with families of children with ASD (3). However, a significant improvement in parent's facial expression and affect, response to behavioural cues, eye contact towards child and offering of guidance was found following Theraplay. These behaviours, alongside parent's encouragement, were found to statistically improve as the sessions progressed over time. This pattern of progression was not statistically significant for parental eye contact. Effect sizes could not be established; therefore, the true magnitude of this effect cannot be concluded.

Treatment. Where reported or calculated, 1:1 Theraplay sessions demonstrated more meaningful effect (ranging from moderate to large). Group Theraplay was also found to show meaningful change; however, there was a broader range of effect (small to large). Firm conclusions cannot be made due to variance between studies, missing information, and more studies using a 1:1 format.

Discussion

The primary aim of this review was to assess the effectiveness of Theraplay for children aged 12 years with various presenting difficulties. Alternatively, the review highlighted the lack of rigorous research into Theraplay's evidence base. Whilst the current review is not considered an 'empty' review (Lang, Edwards, & Fleiszer, 2007), the lack of studies means that the results could not be synthesised to draw a conclusion into Theraplay's evidence base for children under 12. Nonetheless, Theraplay is a well-practiced intervention across the world, and the review is considered important to raise awareness into Theraplay's scant evidence base (Schlosser & Sigafoos, 2009).

Of the few studies included, only one study from a previous review (Brayman, 2016) was eligible for the current review (Bojanowski & Ammen, 2011).Of the small sample, mixed results were found regarding the effectiveness of Theraplay, compounded by the mixed quality and potential biases of studies.

Theraplay was seen to be effective for children with internalising difficulties and a dual diagnosis of a language disorder and clinical shyness/social anxiety. Most of the changes were found when expanding the design to multiple clinical settings and after a 2-year follow-up, suggesting the generalisability and longevity of the effectiveness of Theraplay for this population group.

Mixed results were found for children with developmental disabilities. Theraplay was found to be more effective at enhancing social difficulties than usual school classes for children with ID, whereas some (but not all) changes within the parent–child relationship were found following Theraplay for children with ASD. The least meaningful change was using Theraplay for children with intellectual disabilities and improving social responsiveness. Theraplay was not found to be effective at reducing social and emotional difficulties for LAC, with no significant changes observed following intervention. Interestingly, this was the only study that explicitly reported that they had no affiliation with the Theraplay Institute. Whilst tentative conclusions can be drawn into the effectiveness of Theraplay in comparison with control groups, most of these results can only provide inferences that Theraplay is better than nothing due to their pre-post design.

It is important to consider the methodological quality of the studies included in the review. Demographic data were presented well across most studies. However, there were many inconsistencies in how Theraplay intervention was delivered and a high level of heterogeneity between studies. Most studies utilised a case series design, which were poor at providing clear details regarding their inclusion/exclusion criteria and participant selection process. Furthermore, the two RCT studies lacked information into their randomisation process and how control group data were collected.

The foundations of attachment theory within the Theraplay model are widely promoted. Studies included in the review varied in their explanations of how the presenting problem related to the theory. Theraplay acknowledges the central role of parents supporting the child in learning self-regulation skills, which could be supported within some of t the changes found. However, Theraplay promotes their goal to 'change the child's internal working model through interactions that are responsive, attuned, empathic and reflective' (Booth & Jernberg, 2009, p. 57–58). First, measuring an internalised concept of internal working models leads to challenges itself. Second, none of the studies included monitored any changes related to children's attachment presentations. Therefore, it is difficult to establish whether the changes observed were related to changes in attachment and internal working models, as the Theraplay model would suggest.

Theraplay's inclusion of key adults (e.g. parent, teacher) highlights the role of modelling and social learning theory within the approach (Bandura, 1978). During the initial sessions, the Theraplay therapists model the Theraplay games to parents/carers whilst they observe. The lead adult is then transitioned to from the therapist to the parent/carer to take a lead of the games/sessions. It could therefore be suggested that modelling provides a key mechanism and underlying process of change for children within the Theraplay model. Previous qualitative research identified the theme of experiential learning and modelling from parental focus groups (Hong, 2014). However, only one study measured any parental change during and following intervention. Significant changes were found, but no account was provided into how these changes may or may not have contributed to any changes with the child.

Despite the Theraplay model's establishment in 1970, and the broadness of this review question, it was surprising to find only six eligible articles and the high level of heterogeneity and quality within these articles. A final aim of the review was to establish the evidence of Theraplay in line with the hourglass model (Salkovski, 1995) and its current implementation within services. Theraplay literature remains in the early stages of establishing a rigorous evidence base. Most of the literature utilises clinical perspective and smaller scale exploratory studies, and only two RCTs found using the current reviews criteria. Theraplay's use, however, has broadened out within clinical practise and presenting difficulties, despite previous acknowledgements for the need of more

rigorous research and publications in peer-reviewed journals (Munns, 2000; Wardrop & Meyer, 2009). Despite the lack of rigorous, quantitative evidence, many therapists and services who utilise Theraplay validate their experience of its effectiveness (Francis Bennion & Humrich, 2017; Hong, 2014). There are many arguments for practice-based evidence of integrating expertise and service-led parameters (Barkham, Stiles, Lambert, & Mellor-Clark, 2010).

Limitations

Specificity and sensitivity searches were conducted in the current review to establish the most effective search terms. Despite this, the high number of initial studies found during searches, in comparison with those that met inclusion criteria, highlights potential limitations with the search process. The search process is likely to have excluded studies that focused on the adult role and associated factors within the Theraplay sessions and may explain some of the missing information included within the study.

The absence of eligible studies may reflect a lack of research within the area. However, the inclusion of published studies only, and the exclusion of studies that reported the use of Theraplay with other approaches, also places the review at risk of publication bias. The quality appraisal process and heterogeneity between studies also made it difficult to draw firm conclusions in relation to the primary aim of the review.

Finally, it is important to acknowledge that none of the authors completing the review has no affiliation with the Theraplay Institute. However, two researchers (RM and SW) have completed the Level One Theraplay training established by the Theraplay Institute (2017d). This may have led to some reporting bias within the review process.

Future research

First, future research into Theraplay needs to be of higher quality, using more robust and rigorous methodological design. Research monitoring any changes to children's attachment patterns and the underlying premise of the Theraplay model would be advantageous. Monitoring process mechanisms within Theraplay sessions (i.e. games related to the four core concepts) would provide the opportunity to evaluate change in the client's presenting difficulties and investigate what the key ingredients to change are. Further research into the role of the key adult within sessions (either parent/carer or teacher), including the modelling process between therapist and adult, would also be of benefit. Finally, more published research into the effectiveness and efficacy of Theraplay for various presentations is recommended. More published research would provide clarity into whether Theraplay is an effective model for children's mental health difficulties and contribute to its implementation within services worldwide.

With these recommendations in mind, it would also be helpful to consider why there is a lack of high quality and rigorous research when using the Theraplay model, which may help to address any potential barriers.

Conclusion

Theraplay is a well-used approach for many children and families with various presenting difficulties. Despite Theraplay's implementation in services, the current review highlights the lack of rigorous research conducted into its effectiveness and mechanisms of change for children aged 12 years and under. Whilst some promising findings are suggested, a maximum of two studies for each presenting problem were found eligible within the current systematic literature review with quality appraisal tools highlighting limitations of the eligible studies. The current systematic literature review suggests that Theraplay's practice is ahead of research and a rigorous evidence base, with further research into its effectiveness warranted.

Acknowledgements

This systematic literature review was funded by the University of Lincoln and was completed as part of the Trent Doctorate in Clinical Psychology for author RM. The protocol and review was registered on the PROSPERO database (registration number CRD42018104461). The authors would like to thank librarians at the University of Lincoln and the Research Director at the Theraplay Institute for their contribution in supporting the access of articles within the literature searches. The authors have declared that they have no competing or potential conflicts of interest.

Ethical information

No ethical approval was required for this article as it is a systematic literature review. The article is registered with PROSPERO, dated 27.07.2018, registration number CRD42018104461.

Correspondence

Rebecca Money, Trent Doctorate in Clinical Psychology (DClinPsy), University of Lincoln, Sarah Swift Building, Brayford East, Lincoln, Lincolnshire, LN6 7TS, UK; Email: 16662523@students.lincoln.ac.uk

Note

1 Theraplay is a registered service mark of The Theraplay® Institute, Evanston, IL, USA.

Supporting information

Additional Supporting Information may be found in the online version of this article:

Table S1. Exclusion results from search.

References

Substance Abuse and Mental Health Service Administration (n.d.). National registry for evidence-based programs and practices. Theraplay. Retrieved from http://nrepp.samhsa.gov/ProgramProfile.aspx?id=156#hide3 on 14th July 2018.

Achenbach, T.M., & Rescorla, L. (2001). *Manual for the ASEBA school-age forms and profiles*. Burlington: University of Vermont, Research Centre for Children, Youth & Families.

Bandura, A. (1978). Social learning theory of aggression. *Journal of Communication*, *28*(3), 12–29.

Barkham, M., Stiles, W.B., Lambert, M.J., & Mellor-Clark, J. (2010). Building a rigorous and relevant knowledge base for the psychological therapies. In M. Barkham, G.E. Hardy & J. Mellor-Clark (Eds.), *Developing and delivering practice-based evidence: a guide for the psychological therapies* (pp. 21–61). West Sussex: John Wiley & Sons Ltd.

Bojanowski, J.J., & Ammen, S. (2011). Discriminating between pre-versus post-theraplay treatment marschak interaction methods using the marschak interaction method rating system. *International Journal of Play Therapy*, *20*, 1–11.

Boland, A., M. Cherry, & R. Dickson (Eds.) (2014). *Doing a Systematic Review: A Student's Guide*. London: SAGE Publications.

Booth, P.B., & Jernberg, A.M. (2009). *Theraplay: Helping parents and children build better relationships through attachment-based play*. San Francisco, CA: John Wiley & Sons.

Booth, P.B., & Lindaman, S. (2000). Theraplay for enhancing attachment in adopted children. In H.G. Kaduson & C.E. Schaefer (Eds.), *Short Term Play Therapy for Children* (pp. 194–227). New York: Guilford Press.

Booth, P.B., & Winstead, M.L.-R. (2015). Theraplay®: Repairing relationships, helping families heal. In D.A. Crenshaw & A.L. Stewart (Eds.), *Play therapy: A comprehensive guide to theory and practice* (pp. 141–155). New York: Guilford Press.

Booth, P.B., & Winstead, M.L.-R. (2016). Theraplay: Creating secure and joyful attachment relationships. In K.J. O'Connor, C.E. Schaefer & L.D. Braverman (Eds.), *Handbook of play therapy* (pp. 165–194). New Jersey: John Wiley & Sons.

Bowlby, J. (1973). Attachment and loss. *Separation Anxiety and Anger*, Vol. *2*. London: Hogarth Press.

Brayman, R. (2016). *The effectiveness of Theraplay as treatment for older children with attachment difficulties* (Unpublished masters dissertation). St. Paul, MN: St. Catherine University, University of St. Thomas.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. New York: Routledge Academic.

Constantino, J.N., Davis, S.A., Todd, R.D., Schindler, M.K., Gross, M.M., Brophy, S.L., … & Reich, W. (2003). Validation of a brief quantitative measure of autistic traits: Comparison of the social responsiveness scale with the autism diagnostic interview-revised. *Journal of Autism and Developmental Disorders*, *33*(4), 427–433.

Dancey, C., & Reidy, J. (2017). *Statistics without maths for psychology*. Harlow: Pearson Education Limited.

Döpfner, M., Berner, W., Flechtner, H., Lehmkuhl, G., & Steinhausen, H.C. (1999). Psychopathologisches Befund-System für Kinder und Jugendliche:(CASCAP-D). *[Clinical Assessment Scale for Child and Adolescent Psychopathology (CASCAP-D)]*. Germany: Hogrefe Verlag für Psychologie.

Francis, Y.J., Bennion, K., & Humrich, S. (2017). Evaluating the outcomes of a school based theraplay® project for looked after children. *Educational Psychology in Practice*, *33*(3), 308–322. https://doi.org/10.1080/02667363.2017.1324405.

Gagnier, J.J., Moher, D., Boon, H., Beyene, J., & Bombardier, C. (2012). Investigating clinical heterogeneity in systematic reviews: A methodologic review of guidance in the literature. *BMC Medical Research Methodology*, *12*, 111. https://doi.org/10.1186/1471-2288-12-111.

Gerhardt, S. (2004). *Why love matters: How love shapes a baby's brain*. Hove: Brunner Routledge.

Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, *38*(5), 581–586.

Hiles Howard, A.R., Lindaman, S., Copeland, R., & Cross, D.R. (2018). Theraplay impact on parents and children with autism spectrum disorder: Improvements in affect, joint attention, and social cooperation. *International Journal of Play Therapy*, *27*(1), 56–68. https://doi.org/10.1037/pla0000056.

Hong, R. (2014). Practitioners' evaluations of Theraplay as an effective tool in serving foster and adopted children and their families (Unpublished doctoral dissertation). Chicago, IL: Loyola University Chicago.

Theraplay Institute (2017d). *Theraplay, professional training*. Retrieved from https://www.theraplay.org/index.php/training on 3rd August 2018.

Theraplay Institute (2017c). *How Theraplay differs from other child therapies*. Retrieved from https://www.theraplay.org/index.php/how-theraplay-differs on 14th July 2018.

Theraplay Institute (2017b). *Theraplay treatment outcome research*. Retrieved from https://www.theraplay.org/index.php/theraplay-research on 14th July 2018.

Theraplay Institute (2017a). *Articles about Theraplay*. Retrieved from https://www.theraplay.org/index.php/articles-about-theraplay on 14th July 2018.

Landis, R.J., & Koch, G.G. (1977). An application of hierarchical kappa-type statistics in the assessment of majority agreement among multiple observers. *Biometrics*, *33*, 363–374.

Lang, A., Edwards, N., & Fleiszer, A. (2007). Empty systematic reviews: Hidden perils and lessons learned. *Journal of Clinical Epidemiology*, *60*, 595–597. https://doi.org/10.1016/j.jclinepi.2007.01.005.

Lindaman, S.L., Booth, P.B., & Chambers, C.L. (2000). Assessing parent–child interactions with the Marschak Interaction Method (MIM). In K. Gitlin-Weiner, C. Schafer & A. Sandgrund (Eds.), *Play diagnosis and assessment*, Vol. *II* (pp. 371–400). New York: Wiley.

Mahan, M.G. (1999). *Theraplay as an intervention with previously institutionalized twins having attachment difficulties* (Unpublished doctoral dissertation). Chicago, IL: The Chicago School of Professional Psychology.

Marsden, E., & Torgerson, C.J. (2012). Single group, pre-and post-test research designs: Some methodological concerns. *Oxford Review of Education*, *38*(5), 583–616. https://doi.org/10.1080/03054985.2012.731208.

Mason, C.M. (2007). *Parent and therapist perceptions of therapy with a late -placed foster or adopted child* (Unpublished doctoral dissertation). Chicago, IL: Loyola University Chicago.

McKay, J.M., Pickens, J., & Stewart, A.L. (1996). Inventoried and observed stress in parent-child interactions. *Current Psychology*, *15*(3), 223–234. https://doi.org/10.1007/BF02686879.

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D.G., The PRISMA Group (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, *6*(7), e1000097. https://doi.org/10.1371/journal.pmed1000097.

Moola, S., Munn, Z., Tufanaru, C., Aromataris, E., Sears, K., Sfetcu, R., … & Mu, P.-F.Chapter 7: Systematic reviews of etiology and risk. In: E. Aromataris, & Z. Munn (Editors). *Joanna Briggs Institute Reviewer's Manual*. The Joanna Briggs Institute, 2017. Retrieved from https://reviewersmanual.joannabriggs.org/.

Munns, E. (Ed.) (2000). *Theraplay: Innovations in attachment-enhancing play therapy*. New York, NY: Jason Aronson.

Munns, E. (Ed.) (2009). *Applications of family and group Theraplay*. New York, NY: Jason Aronson.

Myrow, D.L. (2016). Enjoying theraplay with school-age children. In A.A. Drewes & C.E. Schaefer (Eds.), *Play therapy in middle childhood* (pp. 115–133). Washington: American Psychological Association.

Myrow-Bundy, S., & Booth, P.B. (2009). Theraplay: Supporting attachment relationships. In K.J. O'Connor & L.D. Braverman (Eds.), *Play therapy theory and practice: Comparing theories and techniques* (pp. 315–366). Hoboken, NJ: John Wiley & Sons Inc.

O'Connor, K., Ammen, S., Backman, T.L., & Hitchcock, D. (2001). *The Marschak Interaction Method Rating System* (Unpublished instrument). Fresno, CA: Alliant International University.

Petticrew, M., & Roberts, H. (2005). *Systematic reviews in the social sciences: A practical guide*. Hoboken, NJ: Blackwell Publishing.

Robison, M., Lindaman, S., Clemmons, M., Doyle, K., & Ryan, M. (2009). "I Deserve a Family": The evolution of an adolescent's behavior and beliefs about himself and others when treated with theraplay in residential care. *Child & Adolescent Social Work Journal*, *26*(4), 291–306.

Roth, A., & Fonagy, P. (2005). *What works for whom? A critical review of psychotherapy research* (2nd edn). New York: The Guilford Press.

Salkovskis, P.M. (1995). Demonstrating specific effects in cognitive and behavioural therapy. *Research Foundations for Psychotherapy Practice*, 191–228.

Sanderson, S., Tatt, I.D., & Higgins, J. (2007). Tools for assessing quality and susceptibility to bias in observational studies in epidemiology: A systematic review and annotated bibliography. *International Journal of Epidemiology*, *36*, 666–676.
Schlosser, R., & Sigafoos, J. (2009). 'Empty' reviews and evidence-based practice. *Evidence-based Communication Assessment and Intervention*, *39*, 1–3.
Schore, A.N. (2000). Attachment and the regulation of the right brain. *Attachment and Human Development*, *2*(1), 23–47.
Schore, A.N. (2001). Effects of a secure attachment relationship on right brain development, affect regulation and infant mental health. *Infant Mental Health Journal*, *22*, 7–66.
Schore, A.N. (2005). Attachment, affect regulation, and the developing right brain: linking developmental neuroscience to pediatrics. *Pediatrics in Review, 26*, 204–217.
Siu, A.F. (2009). Theraplay in the chinese world: An intervention program for hong kong children with internalizing problems. *International Journal of Play Therapy*, *18*(1), 1–12. https://doi.org/10.1037/a0013979.
Siu, A.F. (2014). Effectiveness of group theraplay® on enhancing social skills among children with developmental disabilities. *International Journal of Play Therapy*, *23*(4), 187–203. https://doi.org/10.1037/a0038158.
Tufanaru, C., Munn, Z., Aromataris, E., Campbell, J., & Hopp, L. (2017). Chapter 3: Systematic reviews of effectiveness. In: E. Aromataris, & Z. Munn (Editors). *Joanna Briggs Institute Reviewer's Manual*. The Joanna Briggs Institute. Available from https://reviewersmanual.joannabriggs.org/
Voss, P.H., & Rehfuess, E.A. (2012). Quality appraisal in systematic reviews of public health interventions: An empirical study on the impact of choice of tool on meta-analysis. *Journal of Epidemiology and Community Health*, *67*, 98–104.
Wardrop, J.L., & Meyer, L.A. (2009). Research on theraplay effectiveness. In E. Munns (Ed.), *Applications of family and group Theraplay* (pp. 17–26). Lanham, MD: Jason Aronson.
Weir, K.N. (2007). Using integrative play therapy with adoptive families to treat reactive attachment disorder: A case example. *Journal of Family Psychotherapy*, *18*(4), 1–16. https://doi.org/10.1300/J085v18n04_01.
Weir, K.N., Lee, S., Canosa, P., Rodrigues, N., McWilliams, M., & Parker, L. (2013). Whole family theraplay: Integrating family systems theory and theraplay to treat adoptive families. *Adoption Quarterly*, *16*, 175–200.
Wettig, H.H., Coleman, A., & Geider, F.J. (2011). Evaluating the effectiveness of theraplay in treating shy, socially withdrawn children. *International Journal of Play Therapy*, *20*(1), 26–37. https://doi.org/10.1037/a0022666.
Wettig, H.H.G., Franke, U., & Fjordbak, B.S. (2006). Evaluating the effectiveness of theraplay. In C.E. Schaefer & H.G. Kaduson (Eds.), *Contemporary play therapy: Theory, research, and practice* (pp. 103–135). New York: Guilford Press.
Wolpert, M., Cheng, H., & Deighton, J. (2015). Measurement Issues: Review of four patient reported outcome measures: SDQ, RCADS, C/ORS and GBO–their strengths and limitations for clinical use and service evaluation. *Child and Adolescent Mental Health*, *20*, 63–70.

Accepted for publication: 12 July 2020