



Mindful Parenting Programs in Non-clinical Contexts: A Qualitative Review of Child Outcomes and Programs, and Recommendations for Future Research

Hali Kil^{1,2} · Rebecca Antonacci¹

Published online: 7 May 2020

© Springer Science+Business Media, LLC, part of Springer Nature 2020

Abstract

Mindful parenting programs, providing mindfulness training for parents and caregivers, have been gaining increasing attention in recent years. Parents participating in these programs have reported benefits in emotional awareness, listening, and parent-child relationships at post-intervention. Considering that many mindful parenting programs aim to train parents generally, rather than specifically targeting parents of clinic-referred or diagnosed children, it is necessary to ascertain the impact of these programs in non-clinical, community samples. In the present qualitative review, databases were searched for studies that reported on children's outcomes following mindful parenting programs for parents of typically developing children without clinical diagnoses. A synthesis of selected papers ($n = 6$) demonstrated promising but limited impact of mindful parenting programs on children's psychosocial functioning. Differences emerged across programs in themes and mindfulness elements covered. Results demonstrate a need for more rigorous and multi-informant research on the preventative implications of mindful parenting programs in non-clinical contexts for child functioning.

Keywords Mindfulness · Mindful parenting · Child functioning · Parenting programs · Community samples

Highlights

- Mindful parenting programs (MPPs) for community parents are numerous and variable.
- MPPs may have a promising impact on community children, but more research is needed.
- Multi-informant assessments of MPPs are needed to confirm preventive effects.

Over the last couple of decades, mindfulness research has examined the benefits of mindfulness training, in the form of mindfulness-based and mindfulness-informed programs, for parents of children who have been diagnosed with psychosocial or cognitive difficulties and medical disorders. With the surge of lay popularity of mindfulness and related practices, some researchers have also begun to investigate the impact of mindfulness training for parents of typically-developing or community-sampled children (i.e., non-clinical; without

clinical diagnoses or referrals), targeting the premise of universal prevention (e.g. Bayer et al. 2007). While a number of reviews have assessed the impact of mindful parenting programs for families impacted by children's clinical diagnoses (e.g. Bögels et al. 2010; Cachia et al. 2016), there is yet no comprehensive review solely focusing on the impact of mindful parenting programs for non-clinical samples of children and their families. Thus, we review the existing literature on mindful parenting programs for parents of non-clinical children and the benefits that these children incur as a result of such training. We then pose recommendations with regards to future research on mindful parenting programs for non-clinical children and their families.

✉ Hali Kil
hali.kil@camh.ca

¹ Department of Psychology, University of Toronto, Toronto, ON, Canada

² Present address: McCain Centre for Child, Youth, and Family Mental Health, Centre for Addiction and Mental Health, 80 Workman Way, Toronto, ON M6J 1H4, Canada

Background

Programs that train participants on elements of mindfulness practice are typically used with clinical populations

experiencing various forms of medical issues, ranging from psychopathologies to physiological disorders. In those experiencing clinical-psychological disorders such as depression, anxiety, posttraumatic stress disorder, and eating disorders, mindfulness-based interventions (MBIs) have been found to be comparable to standard treatment, or treatment as usual (see Coronado-Montoya et al. 2016; Keng et al. 2011 for comprehensive reviews). Similarly, for those with pain-causing medical diagnoses such as cancer and arthritis, MBIs typically result in reduction of perceived pain and greater tolerance for the physiological discomfort associated with their diagnoses (Kohut et al. 2017; Shennan et al. 2011). MBIs have also been used with stressed community samples, demonstrating significant stress reduction across sample demographic profiles (Bränström et al. 2011; Evans et al. 2011; Galla et al. 2015).

Common MBIs used in these cases are Mindfulness Based Stress Reduction (MBSR) and Mindfulness Based Cognitive Therapy (MBCT). MBSR is an eight-week group program developed by Jon-Kabat Zinn to reduce stress through practices such as meditation and yoga (Kabat-Zinn 1990). MBCT relies on a similar 8-week format, with the integration of cognitive therapy, as well as mindfulness-based teaching and practice (Segal et al. 2004). MBCT groups must be led by a licensed health care professional whereas MBSR can be led by any individual with certified training in MBSR delivery (Smith et al. 2008).

Programs that focus on elements of mindfulness may involve modifications of primary interventions such as MBCT or MBSR (i.e. mindfulness-based programs) or may incorporate mindfulness practice into existing non-mindfulness programs (i.e. mindfulness-informed programs). The distinction between mindfulness-informed and mindfulness-based approaches has been identified by Crane et al. (2017): programs with the former approach emphasize acceptance of experience rather than control, and may include some form of mindfulness meditation; programs with the latter approach include formal and informal mindfulness meditation, with mindfulness as the foundation upon which the program is based. Still other programs incorporate elements of mindfulness meditation training and theoretical teaching of mindfulness in a manner determined by its creators, who are typically researchers and/or clinicians.

With the positive impact of MBIs established over the last few decades, attention has turned to mindfulness training programs for interpersonal and relational settings. Some of these interventions cater to familial contexts, focusing on parents and their parenting thoughts and behaviors, and broadening the existing understanding of the benefits of mindfulness to incorporate family functioning. These mindful parenting programs incorporate meditation or mindful attention and emotion regulation skills building, elements of other mindfulness training that can help

individuals to direct attention and awareness to the present and also help to build the foundation for reduced over-reactivity or stress in interpersonal situations (Crane et al. 2017; Cullen 2011; Garland et al. 2015). In conjunction with these mindfulness elements, mindful parenting programs incorporate activities found in traditional parenting programs to build parenting skills, including positive reinforcement (i.e. praising the child), showing warmth, and limit-setting (Dawe and Harnett 2007; Bögels et al. 2010).

The majority of mindful parenting programs are formulated for those with children experiencing psychosocial difficulties, intellectual disabilities or developmental delays (e.g. Benn et al. 2012; Neece 2014; Roberts and Neece 2015; Singh et al. 2010), and chronic or terminal medical conditions (e.g. Mehranfar et al. 2012; Minor et al. 2006). Increasing research efforts have been made to investigate the effects of mindful parenting programs for parents of children experiencing these clinical issues. Children with clinical disorders or diagnoses whose parents participate in these programs tend to show various psychosocial improvements, such as reductions in noncompliance and externalizing problems and improved attention regulation (Felder et al. 2017; Singh et al. 2006). Researchers suggest that mindful parenting programs result in parents' increased emotion regulation ability, positive emotion, and lowered stress (Duncan and Bardacke 2010; Haydicky et al. 2017; Perez-Blasco et al. 2013), which together facilitate their children's psychosocial competence. Overall, mindful parenting programs targeting parents of clinical child populations have been demonstrated to result in improvements in family, parent, and child functioning (Twohig et al. 2010).

The Present Review

While much of the literature on mindful parenting programs surrounds clinic-referred or diagnosed children and their families, there is relatively limited research on their non-clinical counterparts. Work on the latter population can inform whether mindful parenting programs have preventative value for those who are not (yet) impacted by clinical diagnoses. Research suggests that community samples of parents participating in mindful parenting programs benefit from increased emotion regulation ability, reduced stress, and present-focused attention that is usually afforded with mindfulness training (Burke et al. 2017; Corthorn and Milicic 2016). This improved functioning in parents echoes existing work with clinical samples, and is often the focus of research. Because the body of research on mindful parenting programs is still developing, focusing on parent change following program participation provides initial information on program effectiveness. A more recent trend when assessing outcomes of mindful parenting programs is how children of parents participating in these

programs demonstrate improved functioning as a result of their parents' participation. Thus, the objective of this report is to qualitatively review the literature on the changes in social, emotional, or behavioral functioning that non-clinical children incur as a result of their parents' participation in mindful parenting programs.

Methods

The studies included in the present review are those that evaluated child outcomes following mindfulness-based and mindfulness-informed parenting programs directed toward parents of undiagnosed, typically developing children. Although mindfulness-based and mindfulness-informed programs are conceptually distinct (Crane et al. 2017), we wished to include a broad spectrum of programs and therefore refer to the two types collectively as mindful parenting programs.

We opted to conduct a systematic search of the literature on PSYCInfo, CINAHL and PubMed databases. While a qualitative review does not require a stringent search and vetting process of a systematic review (Grant and Booth 2009), we opted for a systematic search of the literature in order to thoroughly capture the available published research on our topic. The literature search process took place in June and July of 2019. Search terms included combinations of the following key terms found anywhere within the record: mindfulness, mindful, adolescent, children, infants, toddlers, teens, parents, interventions, programs, treatments, training. Exclusion terms were added to the title field so as to exclude records primarily targeting clinical populations: ADHD, autism, cancer, pain, chronic.

Records were included if the sample included parents with children that were typically developing, meaning there was no physical illness requiring medical intervention such as cancer and no clinically elevated levels of psychopathologies such as developmental delays or externalizing and internalizing problems warranting clinical-referral, or elevated regulatory (sleeping problems, excessive crying) difficulties for infants and toddlers, based on the study authors' reports of T-scores on standardized measures, elevated baseline total difficulties scores on the Strengths and Difficulties Questionnaire (SDQ; see Goodman 2001), or diagnoses based on clinical assessments and interviews. Further, included records reported on children's pre- to post-program changes in outcomes, and identified the type of parent-directed mindfulness training program delivered. Records were excluded if the majority (more than 50%) of participating families had children with autism, ADHD, internalizing or externalizing problems requiring clinical referral, chronic or physical illness; if the program involved both child and parent participation; if the program was run concurrently with another established parenting or family intervention (unless in an RCT as a

comparison condition); and if only parents' outcomes as an effect of the program were assessed.

This search identified a total of 928 records which were then narrowed down by the two authors based on inclusion and exclusion criteria and review to include six records (see PRISMA flow diagram; Fig. 1). If inclusion or exclusion of a record was discrepant across the two authors, the record was discussed in detail to arrive at a consensus.

Results

Study Characteristics

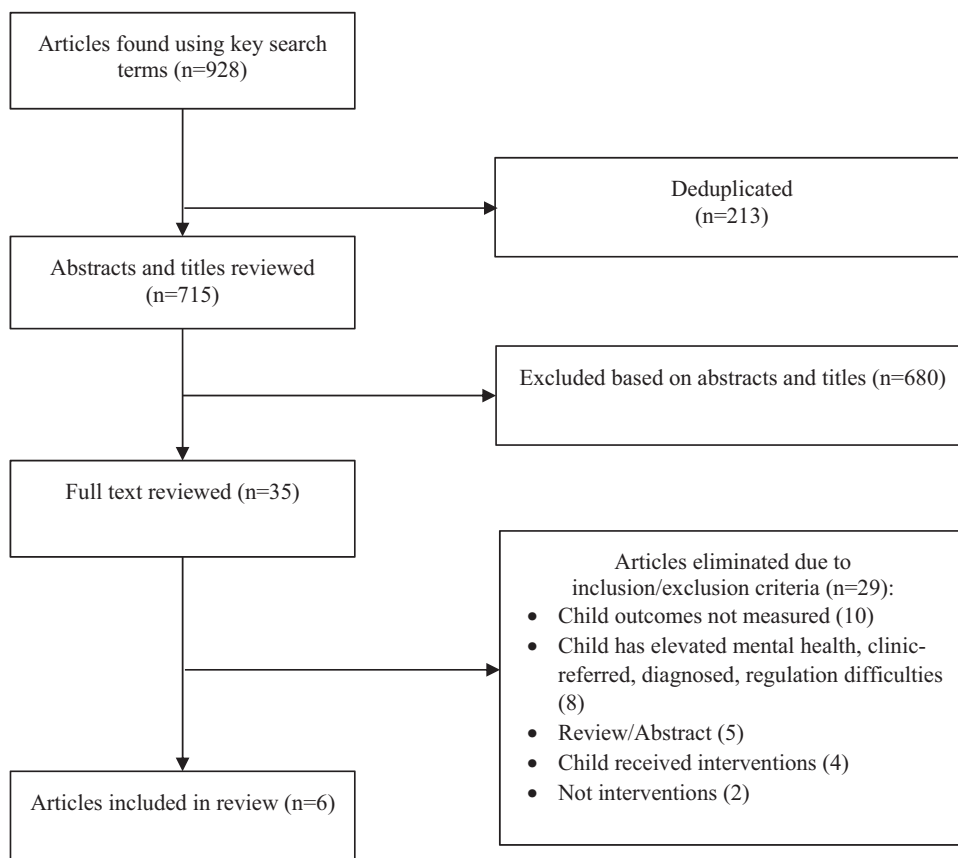
Table 1 summarizes the identified studies. Four studies were quantitative and pre-post in design, while two were qualitative. Quantitative studies included majority mother participants (ranging 79–92%), while qualitative studies included only mothers. The number of participating parents in mindful parenting programs ranged from 6 to 185; the sample sizes of the qualitative studies was 6 and 17, while for quantitative studies, they ranged from 12 to 185. Most age ranges for children fell between 2 to 11 years, although one study included parents of children <3 years of age and one focused on parents of children between one and up to 35 years. Parents were not diagnosed with or clinic-referred for mental health disorders. However, in three studies, parents were homeless, were receiving methadone treatment, or reported stress in caregiving to their child. None of the children (of interest; i.e., non-clinical) were clinic-referred based on mental health diagnoses or for psychosocial difficulties, with the exception of the clinical comparison sample in Potharst et al. (2018).

Types of Programs

Mindful parenting programs lasted 6–12 weeks. Five different types of programs were identified. Table 2 summarizes the programs and their components. All but one study reported that facilitators of the mindful parenting program were trained or trainee mental health practitioners, or parent educators. All programs involved some form of mindfulness training for the participants.

Characteristics of mindfulness (e.g. awareness, present-focused attention, nonjudgment) served as a core foundation of the program in only two cases: Mindful Parenting Program (MPP; Altmaier and Maloney 2007) and Mindful Parenting (MP; Ma and Siu 2016; Potharst et al. 2017). When mindfulness served as the foundation in these programs, parents were taught mindfulness skills such as breathing, body awareness, yoga, meditation, and body scan exercises on a regular basis throughout the program. In addition, the program goals were framed within

Fig. 1 Flow diagram



mindfulness tenets, such as bringing awareness and intention to the parent-child relationship.

Mindfulness was peripherally incorporated into the program in three cases: Support, Honor, Inspire, Nurture, Evolve (SHINE; Alhusen et al. 2017), Parents under Pressure (PUP; Dawe and Harnett 2007), and Social, Emotional, and Academic Competence for Children and Parents (SEACAP; Lengua et al. 2018). Mindfulness practice incorporated in these programs were in the form of guided meditation, interactive mindfulness through exercises and peer teaching, and building emotion regulation through mindfulness skills. Additionally, in these programs, cultivation of mindfulness was not a central goal; that is, these programs aimed to promote general parenting capacity or strengthen the parent-child relationship.

Child Outcomes

Across study types, parent-reports of child behavior demonstrated improvements after participation in mindful parenting programs. Children's self-reports and observational reports of their behavior after parents' program participation demonstrated few improvements but mostly no significant changes. Table 3 displays a summary of child outcomes.

Quantitative studies: parent-report

In quantitative studies, parent reports of child behavior improved pre- to post-program participation. Dawe and Harnett (2007) reported that parents in PUP endorsed reduced total difficulties scores and increased prosocial scores on the SDQ following program participation, and that no such changes were evident for the brief parent training or standard care comparisons. Lengua et al. (2018) reported that parents perceived increases in children's social competence and academic readiness after participating in SEACAP, but indicated no changes in internalizing or externalizing behavioral difficulties. Finally, Potharst et al. (2018) reported that, across non-clinical and clinical samples, parents perceived improvements in children's well-being and behavioral functioning on the SDQ following participation in the mindful parenting program, with the effects still persisting at follow-up eight weeks later.

Qualitative studies: parent-report

Parent reports of child behavior improved pre- to post-program participation in both qualitative studies. Alhusen et al.'s (2017) thematic analysis of the effects of the SHINE program with 17 participants demonstrated post-program

improvements in parent reports of children’s well-being. Parents in this study reported improved child behavior and mental health, as well as improved child communication, closeness and connectedness with the mothers after parent participation in the program. Similarly, Ma and Siu’s (2016) thematic analysis of interviews with their six participants of MP resulted in four identified themes, of which the theme “Positive changes in the parent-child relationship” pertained to parent-report of changes in their children. The authors found that two of six parents reported greater child happiness following parent participation in MP.

Quantitative studies: observer-report or task outcome

Two studies included observer-reports of children’s behavior or reports of child-completed tasks, and demonstrated no effect of parent participation in mindful parenting programs on children. Altmaier and Maloney (2007) used trained raters blind to the participation status to assess parent-child connectedness during behavioral home observations, coding for parent-child dyadic processes (parent-child engagement, mutual warmth, positive emotional tone, reciprocity, and mutual intimacy of topic) and parent behavior, the latter of which is not reported on in the present review. No differences were observed between pre- and post-MPP for any of the dyadic process behaviors. In the assessment of the SEACAP program, Lengua et al. (2018) coded parent-child interactions for parents’ and children’s affect and child compliance. Although there was a reduction in negative affect reported after SEACAP participation, no changes in positive affect or child compliance were observed. Additionally, children completed an executive control task before and after the SEACAP program, and showed no changes across the two timepoints.

Discussion

In recent decades, clinicians and researchers have increased efforts to determine whether programs based on or incorporating mindfulness elements may be useful for various populations. The focus of these efforts has been on clinical populations, including parents of children who have been diagnosed with clinical difficulties in functioning or with significant medical issues. More recently, research has been growing on the preventative nature of mindful parenting programs, with the aim of universal prevention in community and non-clinical populations. To address the growing literature in this area, our review focused on typically developing, non-clinical, community child samples and reviewed their outcomes resulting from parents’ participation in mindful parenting programs. Overall, results of six studies suggest that parents perceive decreases in problem

Table 1 Characteristics of all included studies

Authors	Design	Comparisons	Sample size	Parent age (years)	Parent sex	Child age	Parent profile	Child profile
Alhusen et al. (2017)	Qualitative		17	M = 30.9	Mothers only	Under 3 years	Homeless women	None reported
Altmaier and Maloney (2007)	Pre-post		12	24–47; M = 33.58	83% mothers	33–72 months; M = 47 months	None reported	None reported
Dawe and Harnett (2007)	Pre-post	Parents Under Pressure (PUP); brief parent training; standard care (SC)	64 (PUP); 3 (Brief); 7 (SC)	M = 30	86% mothers	2–8 years; M = 45.9 months	Receiving methadone	SDQ mean below abnormal (M = 15.34)
Lengua et al. (2018)	Pre-post		50	M = 45.58	92% mothers	2–6 years	None reported	None reported; participating in early-learning program
Ma and Siu (2016)	Qualitative		6	21–50	Mothers only	2–11 years	Experienced stress or difficulties in childrearing	None reported
Potharst et al. (2018)	Pre-post	Non-clinical sample (NC); clinical sample (C)	98 (NC); 87 (C)	M = 33.6	82% mothers (NC); 79% mothers (C)	1.0–35.3 years, M = 8.9 years (NC); 2.6–25.4 years, M = 11.7 years (C)	None reported	Clinical diagnoses only in clinical condition

Table 2 Programs used in included studies

Authors	Program	No. of weeks	Program content	Goals	Facilitator
Alhusen et al. (2017)	Support, Honor, Inspire, Nurture, Evolve (SHINE)	10	Teaches research-based mindful awareness to those in poverty, homelessness, addictions, abuse, and physical and mental health difficulties. Weekly activities include three formal guided meditations, interactive exercises, demonstrations, and peer teachings on mindfulness practice. Provided in combination with Mindful Awareness Play (MAP), which includes parent-child play activities, but focuses on building parent openness and parenting that can be protective for their children's development.	Promoting mutual regulation, strengthen family attachments, and reduce stress and anxiety (with MAP)	Unknown
Altmeyer and Maloney (2007)	Mindful Parenting Program (MPP)	12	Weekly sessions include bringing awareness to and correcting interactions that can cause disconnect in parent-child relationship such as criticism, projecting anger etc., enhancing familiarity with mindfulness practices such as breathing, body awareness, meditation and integrating these with being aware and enhancing parenting skills.	Creating and maintaining parent-child connection via enhanced self-awareness, mindfulness and intentionality	First author of paper, supervised by psychologist with expertise in treatment content
Dawe and Harnett (2007)	Parents Under Pressure (PUP)	10–12	1–2 h sessions held in the home, with more sessions as needed based on individual needs. (Modules 1 and 2 not described). Module 3: Challenging the notion of an ideal parent. Strengthening parenting competence. Module 4: How to parent under pressure: Increasing mindful awareness, mindfulness skills in coping with negative states without using drugs or alcohol. Module 5: Connecting with your child and encouraging good behavior. Traditional behavioral parent skills training (e.g. praise, reward), mindfulness during child play for emotional availability. Module 6: Mindful child management. Appropriate child management skills taught, mindfulness skills for emotional responding in parenting. Module 7: Coping with lapse and relapse. Relapse prevention and mindful awareness of emotions. Module 8: Extending social networks. Encouraging use of support networks.	Not clear; specific targets of change are identified via assessment prior to PUP	Clinicians trained in PUP treatment and experienced in treating families

Table 2 (continued)

Authors	Program	No. of weeks	Program content	Goals	Facilitator
Lengua et al. (2018)	Social, Emotional, and Academic Competence for Children and Parents (SEACAP)	6	Module 9: Life skills. Practical life skills (e.g. nutrition, budgeting). Module 10: Relationships. Improving communication with partners. Once per week. No week-specific information provided. Program designed to increase parent warmth, consistent limit-setting, and scaffolding; decrease parent negativity. Training provided in mindfulness and emotion regulation for effective parent-child interactions.	Promoting parenting to support children's executive function, social-emotional competence, and academic readiness	Parent educators or mental health providers (by site)
Ma and Siu (2016)	Mindful Parenting (MP)	8	Session 1: Introduction of Mindfulness. Understanding concept of mindful ness, reactive parenting, mindfulness skills. Session 2: Beginner's mind. Understanding parent body sensations and children, learning body scan, gratitude, morning stress exercise, raisin exercise. Session 3: Awareness during stress. Body, emotion, and thought awareness in stress, yoga, breathing, stress exercise. Session 4: Response to stress. Stress exercise, self-compassion, meditation. Session 5: Parenting schemas. Pattern recognition in parenting, mindful walking, breathing exercise. Session 6: Repairing relationships with children. Understanding child emotion and need, self- and child acceptance, perspective taking, body scan, mindful walking. Session 7: Loving-kindness and limits. Self- and other-oriented love and gratitude, setting limits, loving-kindness meditation, breathing exercise. Session 8: Achievement and future plan. Thoughts on program, goals in future.	Emotion regulation in parenting; improving the parent-child relationship	Registered counseling psychologist with mindfulness training and experience teaching mindfulness to adults
Potharst et al. (2018)	Mindful Parenting (MP)	8	Same as in Ma and Siu (2016). Shorter session length offered for non-clinical parents	Same as in Ma and Siu (2016)	Mental health professionals experienced in working with parents, who received training by creator of Mindful Parenting (S. Bogels)

behavior and increases in positive psychosocial functioning after completing mindful parenting programs. Parental reports of typically developing children's outcomes after participating in mindful parenting programs mirror existing work on parental reports of outcomes for clinical child populations. For example, parents who participate in mindfulness training report reductions in their clinically-referred or diagnosed children's levels of internalizing and externalizing problems after participation (e.g. Bogels et al. 2014; Singh et al. 2007).

However, parent reports of children's improved psychosocial functioning post-parent intervention are not consistently echoed by children's own or observed ratings of child behavior (see review by Townshend et al. 2016). In the present review, two studies were identified that measured observed reports of child behavior. Specifically, third-party observational coding of child behavior in studies by Altmaier and Maloney (2007) and Lengua et al. (2018) demonstrated limited change in parent-child interaction quality at home or in the lab. Additionally, Lengua et al. (2018) reported that no changes in executive functioning task performance were evident in children whose parents participated in SEACAP. The results of only two studies cannot be generalized, but provide limited indication of parent-observer discrepancies in rates of children's improvement. The debate regarding validity of maternal reports is an ongoing one, with some studies reporting convergence and others reporting divergence in multi-informant studies involving parents (De Los Reyes et al. 2009; Kerr et al. 2007; Stifter et al. 2008). While the insufficient observer-report data in this review poses limitations in concluding with confidence the effects of mindful parenting programs on children, the results (i.e. no pre-post significant changes according to observers) draw attention to the necessity to include more multi-informant data in future research in order to ascertain the effects of mindful parenting programs.

While parent-observer discrepancies were identified in the present review it is possible that parents' more positive perceptions of their children after participating in mindful parenting programs may impact their parenting, and over time exert an indirect influence on their children's outcomes. For example, May et al. (2016) reported that children perceived elevated parental monitoring after their parents participated in MBSR. Perceived monitoring, in turn, has been found to link to positive social functioning and lower risky behaviours in children (e.g. Borawski et al. 2003; Laird et al. 2003), and may be one mediating parental factor to be explored further. Further, considering that the unique benefits afforded by mindful parenting programs compared to regular parenting interventions is their impact on intrapersonal parenting experiences, such as parental stress and mood states (Benn et al. 2012; Coatsworth et al.

Table 3 Measures and outcomes reported

Author(s)	Child outcome measure(s)	Δ Outcomes (Parent-report)	Δ Outcomes (Observational report)
Alhusen et al. (2017)	Interview (Parent)	Improved behavior, communication, closeness and connectedness to mother, and mental health	
Altmaier and Maloney (2007)	Behavioral Home Observation (BHO)		BHO: not significant
Dawe and Harnett (2007)	Strengths and Difficulties Questionnaire (SDQ)	SDQ: PUP reduced child behavior problems and increased child prosocial scores; no pre-post changes for brief parent training or standard care	
Lengua et al. (2018)	Executive control (EC); Parent-child interaction coding (PCIC); Social Skills Rating System (SSRS)	SSRS: increased social competence and academic readiness; no significant change in internalizing or externalizing behaviors	EC: no changes pre to post PCIC: reduced negative affect; no change in positive affect or child compliance
Ma and Siu (2016)	Interview (Parent)	Enhanced emotion regulation; more compassion; positive change in parent-child relationship	
Potharst et al. (2018)	Well-being Index WHO-5—Adapted (WB); SDQ	WB: improvements at post-test and follow-up (8 weeks), no differences in improvements across clinical and non-clinical SDQ: improvements in total difficulties at post-test and follow-up, no differences in improvements across clinical and non-clinical	

2010; Dawe and Harnett 2007; Singh et al. 2007; van der Oord et al. 2012), it may be worthwhile to consider these variables as facilitators of change in children of parents receiving these programs. Overall, assessing mediators and moderators such as parental behaviors and stress in the parental mindfulness and child behavior link when considering mindful parenting programs may provide a more holistic picture of their effects on children (Chan and Neece 2018).

The present review included a few records that were focused on parents who may experience higher risk for mental health difficulties, including those experiencing stress in parenting, were homeless, or receiving methadone treatment (i.e. Alhusen et al. 2017; Dawe and Harnett 2007; Ma and Siu 2016). These records were included because our inclusion and exclusion criteria did not specify whether parents were receiving support or were at higher-risk for mental health difficulties. However, research indicates that psychopathological risk is oftentimes intergenerationally transmitted, and thus parents who are at-risk for mental health difficulties may have children who experience similar risk (Kim et al. 2009; Plant et al. 2013). As such, while our population of focus was non-clinical children, the samples of some studies may demonstrate greater risk or borderline elevated levels of psychosocial difficulties compared to typical community samples. Caution must be taken in interpreting these results in conjunction with the rest of the studies included herein. Nevertheless, the at-risk parents in these three studies reported significant improvement in their children's psychosocial functioning.

Recommendations

The majority of existing mindful parenting program research pertains to clinical child populations. Thus, the benefits of parent mindfulness training on these children are focused on improvements in clinical symptomology. As exemplified in the present review, relatively limited and mixed effects have been reported in assessments of mindful parenting programs applied to typically developing samples. Given the increasing attention on mindfulness practices and mindful parenting programs, more research is needed to fully understand the impact of mindful parenting training. Thus, future research may undertake the following three recommendations.

First, more research on mindfulness training with non-clinical, community samples is needed to determine whether mindfulness training can have preventative benefits. Future research on mindful parenting programs could focus on comprehensively outlining the specific and lasting outcomes of non-clinical children to assess program efficacy as a preventative measure for those not (yet) diagnosed with clinical disorders. In a related vein, further work is needed

to compare outcomes following mindful parenting and traditional parenting programs. Coatsworth and colleagues (Coatsworth et al. 2010, 2015) have compared the Strengthening Families Program (SFP) and Mindfulness-enhanced Strengthening Families Program (MSFP), and reported similar effects of MSFP and SFP in improving parenting skills and child outcomes. However, such studies are rare, and more systematic research must be conducted to identify whether there exist unique facilitators of parenting change in mindful parenting programs. Additionally, mindfulness researchers focusing on community samples should be vigilant in collecting participant information on pre-existing psychological health and social functioning difficulties. Inclusion of this imperative step will help to create a more selective process by which benefits of mindfulness training can be assessed in the general population.

Second, there is a dearth of existing research effectively reporting on observer perceptions of improved functioning after parent participation in mindful parenting programs. Existing research suggests that parents tend to perceive more child problem behaviors compared to teachers or observers (e.g., Berg-Nielsen et al. 2012; Briggs-Gowan et al. 1996; Youngstrom et al. 2000), which suggests that conclusions drawn by researchers may be limited in perspective when only parents are surveyed. Additionally, parents may be prone to report child improvements following a given intervention due to improvement in their own mental health. For example, in clinical settings, Wilson et al. (2012) reviewed Triple P parenting programs and found a discrepancy in child outcome reports between mothers who participated in the program and fathers who did not. The authors argued that parents who participated in the program may have experienced improved mental states, affecting a positive skew in their evaluation of their children's behavior. It is possible that a similar issue may exist for mindful parenting programs; that is, parents who participate may perceive more optimistic outcomes in their children after experiencing mental health benefits from mindfulness practice. Future studies in both community and clinical settings would benefit from collecting and reporting on observer-reported child outcomes of mindful parenting programs to provide alternative evaluations of improvements in children's functioning. Alternatively, testing the impact of mindful parenting programs compared to a control (i.e. randomized controlled trials) may be informative for ascertaining whether parent reports of child behavior reflects true change.

Lastly, there appears to exist a tremendous variety of mindful parenting programs being validated in the literature. All of the programs reviewed in this report incorporate mindfulness training to some degree (e.g. being attuned to internal states, showing compassion, etc.) and aim to

improve parents' caregiving. Beyond the studies selected for this review, however, there is great variability in mindful parenting programs. For example, other well-known programs not identified in this review include the MSFP (Duncan et al. 2009), Mindful with your Baby (Potharst et al. 2017), as well as unnamed mindfulness-based and -informed interventions (e.g. Singh et al. 2006), among numerous others. The next step in mindful parenting programs research may be to consolidate efforts to establish a single, extensively validated umbrella program that can be feasibly utilized with parents of children with various needs. Future work may also consider the transdiagnostic impact of various mindful parenting programs, giving weight to the components of parent training that may optimally impact children with different needs, and with or without clinical disorders.

Overall, the present review suggests that parents' participation in mindful parenting programs results in their children's improved psychosocial functioning in non-clinical populations. In particular, children may show better social functioning and emotional regulation, and more positive parent-child interactions, at least according to parent reports. As a whole, the reviewed studies in the present report may provide a foundation for understanding the preventative impact of mindful parenting programs on children's psychosocial adjustment. However, given limited information on observer reports of child outcomes in the present review, further research must be done to ascertain whether children with normative emotional and behavioral functioning can incur benefits through their parents' preventative mindful parenting training.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

References

- Alhusen, J. L., Norris-Shortle, C., Cosgrove, K., & Marks, L. (2017). "I'm opening my arms rather than pushing away:" Perceived benefits of a mindfulness-based intervention among homeless women and young children. *Infant Mental Health Journal*, 38(3), 434–442. <https://doi.org/10.1002/imhj.21641>.
- Altmaier, E., & Maloney, R. (2007). An initial evaluation of a mindful parenting program. *Journal of Clinical Psychology*, 63, 1231–1238. <https://doi.org/10.1002/jclp.20395>.
- Bayer, J. K., Hiscock, H., Morton-Allen, E., Ukoumunne, O. C., & Wake, M. (2007). Prevention of mental health problems: rationale for a universal approach. *Archives of Disease in Childhood*, 92(1), 34–38. <https://doi.org/10.1136/adc.2006.100776>.
- Benn, R., Akiva, T., Arel, S., & Roesser, R. W. (2012). Mindfulness training effects for parents and educators of children with special needs. *Developmental Psychology*, 48, 1476–1487. <https://doi.org/10.1037/a0027537>.
- Berg-Nielsen, T. S., Solheim, E., Belsky, J., & Wichstrom, L. (2012). Preschoolers' psychosocial problems: In the eyes of the beholder? Adding teacher characteristics as determinants of discrepant parent-teacher reports. *Child Psychiatry & Human Development*, 43(3), 393–413. <https://doi.org/10.1007/s10578-011-0271-0>.
- Bögels, S. M., Lehtonen, A., & Restifo, K. (2010). Mindful parenting in mental health care. *Mindfulness*, 1(2), 107–120.
- Bögels, S. M., Helleman, J., van Deursen, S., Römer, M., & van der Meulen, R. (2014). Mindful parenting in mental health care: effects on parental and child psychopathology, parental stress, parenting, coparenting, and marital functioning. *Mindfulness*, 5, 536–551. <https://doi.org/10.1007/s12671-013-0209-7>.
- Borawski, E. A., Ievers-Landis, C. E., Lovegreen, L. D., & Trapl, E. S. (2003). Parental monitoring, negotiated unsupervised time, and parental trust: the role of perceived parenting practices in adolescent health risk behaviors. *Journal of Adolescent Health*, 33, 60–70. [https://doi.org/10.1016/S1054-139X\(03\)00100-9](https://doi.org/10.1016/S1054-139X(03)00100-9).
- Bränström, R., Duncan, L. G., & Moskowitz, J. T. (2011). The association between dispositional mindfulness, psychological well-being, and perceived health in a Swedish population-based sample. *British Journal of Health Psychology*, 16(2), 300–316.
- Briggs-Gowan, M. J., Carter, A. S., & Schwab-Stone, M. (1996). Discrepancies among mother, child, and teacher reports: Examining the contributions of maternal depression and anxiety. *Journal of Abnormal Child Psychology*, 24(6), 749–765. <https://doi.org/10.1007/BF01664738>.
- Burke, A., Lam, C. N., Stussman, B., & Yang, H. (2017). Prevalence and patterns of use of mantra, mindfulness and spiritual meditation among adults in the United States. *Complementary and Alternative Medicine*, 17, 1–18. <https://doi.org/10.1186/s12906-017-1827-8>.
- Cachia, R. L., Anderson, A., & Moore, D. W. (2016). Mindfulness, stress and well-being in parents of children with autism spectrum disorder: a systematic review. *Journal of Child and Family Studies*, 25(1), 1–14.
- Chan, N., & Neece, C. L. (2018). Parenting stress and emotion dysregulation among children with developmental delays: the role of parenting behaviors. *Journal of Child and Family Studies*, 27(12), 4071–4082. <https://doi.org/10.1007/s10826-018-1219-9>.
- Coatsworth, J. D., Duncan, L. G., Greenberg, M. T., & Nix, R. L. (2010). Changing parent's mindfulness, child management skills and relationship quality with their youth: results from a randomized pilot intervention trial. *Journal of Child and Family Studies*, 19, 203–217. <https://doi.org/10.1007/s10826-009-9304-8>.
- Coatsworth, J. D., Duncan, L. G., Nix, R. L., Greenberg, M. T., Gayles, J. G., Bamberger, K. T., Berrena, E., & Demi, M. A. (2015). Integrating mindfulness with parent training: effects of the mindfulness-enhanced strengthening families program. *Developmental Psychology*, 51, 26–35. <https://doi.org/10.1037/a0038212>.
- Coronado-Montoya, S., Levis, A. W., Kwakkenbos, L., Steele, R. J., Turner, E. H., & Thombs, B. D. (2016). Reporting of positive results in randomized controlled trials of mindfulness-based mental health interventions. *PLoS ONE*, 11(4), 1–18. <https://doi.org/10.1371/journal.pone.0153220>.
- Corthorn, C., & Milicic, N. (2016). Mindfulness and parenting: a correlational study of non-meditating mothers of preschool children. *Journal of Child and Family Studies*, 25, 1672–1683. <https://doi.org/10.1007/s10826-015-0319-z>.
- Crane, R. S., Brewer, J., Feldman, C., Kabat-Zinn, J., Santorelli, S., Williams, J. M. G., & Kuyken, W. (2017). What defines mindfulness-based programs? The warp and the weft.

- Psychological Medicine*, 47(6), 990–999. <https://doi.org/10.1017/S0033291716003317>.
- Cullen, M. (2011). Mindfulness-based interventions: an emerging phenomenon. *Mindfulness*, 2(3), 186–193. <https://doi.org/10.1007/s12671-011-0058-1>.
- Dawe, S., & Harnett, P. (2007). Reducing potential for child abuse among methadone-maintained parents: results from a randomized controlled trial. *Journal of Substance Abuse Treatment*, 32(4), 381–390. <https://doi.org/10.1016/j.jsat.2006.10.003>.
- Duncan, L. G., & Bardacke, N. (2010). Mindfulness-based childbirth and parenting education: promoting family mindfulness during the perinatal period. *Journal of Child Family Studies*, 19, 190–202. <https://doi.org/10.1007/s10826-009-9313-7>.
- Duncan, L. G., Coatsworth, J. D., & Greenberg, M. T. (2009). A model of mindful parenting: implications for parent–child relationships and prevention research. *Clinical Child and Family Psychology Review*, 12(3), 255–270. <https://doi.org/10.1007/s10567-009-0046-3>.
- Evans, S., Ferrando, S., Carr, C., & Haglin, D. (2011). Mindfulness-based stress reduction (MBSR) and distress in a community-based sample. *Clinical Psychology & Psychotherapy*, 18(6), 553–558.
- Felver, J. C., Tipsord, J. M., Morris, M. J., Racer, K. H., & Dishion, T. J. (2017). The effects of mindfulness-based intervention on children’s attention regulation. *Journal of Attention Disorders*, 21, 872–881. <https://doi.org/10.1177/1087054714548032>.
- Galla, B. M., O’Reilly, G. A., Kitil, M. J., Smalley, S. L., & Black, D. S. (2015). Community-based mindfulness program for disease prevention and health promotion: targeting stress reduction. *American Journal of Health Promotion*, 30(1), 36–41.
- Garland, E. L., Farb, N. A., R. Goldin, P., & Fredrickson, B. L. (2015). Mindfulness broadens awareness and builds eudaimonic meaning: a process model of mindful positive emotion regulation. *Psychological Inquiry*, 26(4), 293–314. <https://doi.org/10.1080/1047840X.2015.1064294>.
- Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(11), 1337–1345. <https://doi.org/10.1097/00004583-200111000-00015>.
- Grant, M. J., & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information & Libraries Journal*, 26(2), 91–108. <https://doi.org/10.1111/j.1471-1842.2009.00848.x>.
- Haydicky, J., Wiener, J., & Shecter, C. (2017). Mechanisms of action in concurrent parent-child mindfulness training: a qualitative exploration. *Mindfulness*, 8, 1018–1035. <https://doi.org/10.1007/s12671-017-0678-1>.
- Kabat-Zinn, J. (1990). *Full catastrophe living: using the wisdom of your body and mind to face stress, pain, and illness*. New York: Dell Publishing.
- Keng, S. L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: a review of empirical studies. *Clinical Psychology Review*, 31, 1041–1056. <https://doi.org/10.1016/j.cpr.2011>.
- Kerr, D. C., Lunkenheimer, E. S., & Olson, S. L. (2007). Assessment of child problem behaviors by multiple informants: a longitudinal study from preschool to school entry. *Journal of Child Psychology and Psychiatry*, 48(10), 967–975.
- Kim, H. K., Capaldi, D. M., Pears, K. C., Kerr, D. C., & Owen, L. D. (2009). Intergenerational transmission of internalising and externalising behaviours across three generations: gender-specific pathways. *Criminal Behaviour and Mental Health*, 19(2), 125–141.
- Kohut, S., Stinson, J., Davies-Chalmers, C., Ruskin, D., & van Wyk, M. (2017). Mindfulness-based interventions in clinical samples of adolescents with chronic illness: a systematic review. *Journal of Alternative Complementary Medicine*, 23, 581–589. <https://doi.org/10.1089/acm.2016.0316>.
- Laird, R. D., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2003). Parents’ monitoring-relevant knowledge and adolescents’ delinquent behavior: evidence of correlated developmental changes and reciprocal influences. *Child Development*, 74, 752–768. <https://doi.org/10.1111/1467-8624.00566>.
- Lengua, L. J., Ruberry, E. J., McEntire, C., Klein, M., & Jones, B. (2018). Preliminary evaluation of an innovative, brief parenting program designed to promote self-regulation in parents and children. *Mindfulness*, 1–12. <https://doi.org/10.1007/s12671-018-1016-y>.
- De Los Reyes, A., Henry, D. B., Tolan, P. H., & Wakschlag, L. S. (2009). Linking informant discrepancies to observed variations in young children’s disruptive behavior. *Journal of Abnormal Child Psychology*, 37(5), 637–652.
- Ma, Y., & Siu, A. F. Y. (2016). A qualitative exploration of an eight-week mindful parenting program for parents. *Journal of Asia Pacific Counseling*, 6, 87–100. <https://doi.org/10.18401/2016.6.2.2>.
- May, L. M., Reinka, M. A., Tipsord, J. M., Felver, J. C., & Berkman, E. T. (2016). Parenting an early adolescent: a pilot study examining neural and relationship quality changes of a mindfulness intervention. *Mindfulness*, 7(5), 1203–1213. <https://doi.org/10.1007/s12671-016-0563-3>.
- Mehranfar, M., Younesi, J., & Banihashem, A. (2012). Effectiveness of mindfulness-based cognitive therapy on reduction of depression and anxiety symptoms in mothers of children with cancer. *Iranian Journal of Cancer Prevention*, 5, 1–9.
- Minor, H. G., Carlson, L. E., Mackenzie, M. J., Zernicke, K., & Jones, L. (2006). Evaluation of a mindfulness-based stress reduction (MBSR) program for caregivers of children with chronic conditions. *Social Work in Health Care*, 43, 91–109. https://doi.org/10.1300/J010v43n01_06.
- Neece, C. L. (2014). Mindfulness-based stress reduction for parents of young children with developmental delays: implications for parental mental health and child behavior problems. *Journal of Applied Research in Intellectual Disabilities*, 27, 174–186. <https://doi.org/10.1111/jar.12064>.
- Perez-Blasco, J., Viguier, P., & Rodrigo, M. (2013). Effects of a mindfulness-based intervention on psychological distress, well-being, and maternal self-efficacy in breast-feeding mothers: results of a pilot study. *Archives of Women’s Mental Health*, 16, 227–236. <https://doi.org/10.1007/s00737-013-0337-z>.
- Plant, D. T., Barker, E. D., Waters, C. S., Pawlby, S., & Pariante, C. M. (2013). Intergenerational transmission of maltreatment and psychopathology: the role of antenatal depression. *Psychological Medicine*, 43(3), 519–528.
- Potharst, S. E., Aktar, E., Rexwinkel, M., Rigterink, M., & Bogels, M. S. (2017). Mindful with your baby: feasibility, acceptability and effects of a mindful parenting group training for mothers and their babies in a mental health context. *Mindfulness*, 8, 1236–1250. <https://doi.org/10.1007/s12671-017-0699-9>.
- Potharst, E.S., Baartmans, J.M., & Bögels, S.M. (2018). Mindful parenting training in a clinical versus non-clinical setting: an explorative study. *Mindfulness*, 1–15. <https://doi.org/10.1007/s12671-018-1021-1>.
- Roberts, L. R., & Neece, C. L. (2015). Feasibility of mindfulness-based stress reduction intervention for parents of children with developmental delays. *Issues in Mental Health Nursing*, 36, 592–602. <https://doi.org/10.3109/01612840.2015.1017063>.
- Segal, Z. V., Teasdale, J. D., & Williams, J. M. G. (2004). Mindfulness-based cognitive therapy: theoretical rationale and empirical status. In S. C. Hayes, V. M. Follette & M. M. Linehan (Eds.), *Mindfulness and acceptance: expanding the cognitive-behavioral tradition* (pp. 45–65). New York, NY: Guilford Press.
- Shennan, C., Payne, S., & Fenlon, D. (2011). What is the evidence for the use of mindfulness-based interventions in cancer care? A review. *Psycho-oncology*, 20(7), 681–697.

- Singh, N. N., Lancioni, G. E., Winton, A. S., Fisher, B. C., Wahler, R. G., Mcleavey, K., & Sabaawi, M. (2006). Mindful parenting decreases aggression, noncompliance, and self-injury in children with autism. *Journal of Emotional and Behavioral Disorders, 14*, 169–177. <https://doi.org/10.1177/10634266060140030401>.
- Singh, N. N., Lancioni, G. E., Winton, A. S., Adkins, A. D., Wahler, R. G., Sabaawi, M., & Singh, J. (2007). Individuals with mental illness can control their aggressive behavior through mindfulness training. *Behavior Modification, 31*, 313–328. <https://doi.org/10.1177/0145445506293585>.
- Singh, N. N., Lancioni, E. G., Winton, W. A., Singh, J., Singh, N. A., Adkins, D. A., & Wahler, G. R. (2010). Training in mindful caregiving transfers to parent-child interactions. *Journal of Child and Family Studies, 19*, 167–174. <https://doi.org/10.1007/s10826-009-9267-9>.
- Smith, B.W., Shelley, B.M., Dalen, J., Wiggins, K., Tooley, E., & Bernard, J. (2008). A pilot study comparing the effects of mindfulness-based and cognitive behavioral stress reduction. *Journal of Alternative Complementary Medicine, 14*(3), 251–258. <https://doi.org/10.1089/acm.2007.0641>.
- Stifter, C. A., Willoughby, M. T., & Towe-Goodman, N. (2008). Agree or disagree? Assessing the convergence between parents and observers on infant temperament. *Infant and Child Development: An International Journal of Research and Practice, 17*(4), 407–426.
- Townshend, K., Jordan, Z., Stephenson, M., & Tsey, K. (2016). The effectiveness of mindful parenting programs in promoting parents' and children's wellbeing: a systematic review. *JBIR Database of Systematic Reviews and Implementation Reports, 14*, 139–180. <https://doi.org/10.11124/JBISRIR-2016-2314>.
- Twohig, M., Field, C., Armstrong, A., & Dahl, A. (2010). Acceptance and mindfulness as mechanisms of change in mindfulness-based interventions for children and adolescents. In R. A. Baer (Ed), *Assessing mindfulness and acceptance processes in clients: illuminating the theory and practice of change* (pp. 225–249). Oakland, CA: New Harbinger Publications.
- Van der Oord, S., Bögels, S. M., & Peijnenburg, D. (2012). The effectiveness of mindfulness training for children with ADHD and mindful parenting for their parents. *Journal of Child and Family Studies, 21*(1), 139–147. <https://doi.org/10.1007/s10826-011-9457-0>.
- Wilson, P., Rush, R., Hussey, S., Puckering, C., Sim, F., Allely, C. S., & Gillberg, C. (2012). How evidence-based is an 'evidence-based parenting program'? A PRISMA systematic review and meta-analysis of Triple P. *BMC Medicine, 10*, 130 <https://doi.org/10.1186/1741-7015-10-130>.
- Youngstrom, E., Loeber, R., & Stouthamer-Loeber, M. (2000). Patterns and correlates of agreement between parent, teacher, and male adolescent ratings of externalizing and internalizing problems. *Journal of Consulting and Clinical Psychology, 68*(6), 1038–1050. <https://doi.org/10.1037/0022-006X.68.6.1038>.