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Mind the Family: Acceptability and outcomes for a mindfulness and imagery enhanced behavioural parenting program

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Enhanced parenting programs aim to meet broader family needs. Past research shows mixed effects for standard programs across differing family characteristics. We evaluate pre-to-post-intervention improvements for fathers (n=115) and mothers (n=223) of children aged 3-12 years with externalizing behaviours who participated in an 8-week mindfulness and imagery enhanced behavioural parenting group program. Parents reported high acceptability and significant pre-to-post-intervention improvements, with large effect sizes, in parent wellbeing, parenting approach, mindful parenting, and child behaviour. Fathers attended the same number of sessions as mothers and demonstrated similar improvements. Blending imagery and mindfulness with behavioural skills appears helpful, including for fathers.

Keywords: parenting; child behaviour; mindfulness; imagery; fathers

(Subject classification codes: 3311, 3312, 3313)

Word count: 11,846

Most children display externalizing behaviours such as temper tantrums, non-compliance, and aggression during their preschool years as they develop an increased sense of self (Campbell, 1995). Parents are tasked with finding the balance between love and limits during this developmental period, scaffolding children's growing capacity to express their needs more adaptively through improved language and self-regulation (Rutter et al., 2006). However, one in eight children continue to show externalizing behaviours throughout childhood, due to a transactional and cumulative interplay of biological, environmental, and parent-child relationship factors (Appleyard et al., 2005; Rutter et al., 2006). Without intervention, the presence of externalizing behaviours throughout childhood is associated with adverse long-term outcomes for the child, family, and community, including increased risk of mental health problems (Reef et al., 2011), criminal activity (Farrington, 1998), and unemployment (Fergusson, 2005). Economic as well as societal costs of untreated child behavioural problems has prompted governments to invest in early intervention including broad dissemination of parenting programs (Sanders et al, 2021; Scott et al., 2001).

Behavioural parent training (BPT) is regarded as the gold-standard treatment for child externalizing problems (Shaffer et al., 2001). Based on operant conditioning and social learning theory, BPT aims to modify parents' responses to their child's behaviour: desirable behaviours are reinforced with positive attention and praise, and undesirable behaviours are discouraged through use of planned ignoring, clear instructions, and consequences (Shaffer et al., 2001). Over 50 years of empirical evidence demonstrates sustained medium to large effect size improvements following BPT across child behaviour and parenting outcomes, including in naturalistic studies where parents attend routine clinical-practice rather than controlled laboratory settings

(Buchanan-Pascall et al., 2018; Gardner et al., 2010; Michelson et al., 2013; van Aar et al., 2017).

Despite clear benefits of BPT for many families, approximately half of referred parents struggle to engage with existing programs (Chacko et al., 2016; Reyno & McGrath, 2006). One area of investigation has noted that fathers consistently demonstrate lower participation rates and poorer outcomes from BPT than mothers (Fletcher et al., 2011; Lundahl et al., 2008). Early studies suggested that it was sufficient for mothers-as-primary-carer to attend BPT and then model or educate fathers (Firestone et al., 1980). However involvement by fathers has since been linked to improved short and long-term effects on child behaviour and parenting, with better outcomes and acceptability for co-parent over father-only formats (Bagner & Eyberg, 2003; Fletcher et al., 2011; Lundahl et al., 2008; Pruett et al., 2017). Fathers play an important role in child development and demonstrate equivalent quality of parenting to mothers within the primary-carer role (e.g., Cabrera et al., 2018; Jones et al., 2022). Research has supported improved outcomes from parenting programs where both parents attend (Lundahl et al., 2008; Panter-Brick et al., 2014; Pruett et al., 2017). BPT has accordingly shifted towards active engagement of “the parent team” to improve consistency between parents, address risk and protective factors for each parent, and strengthen the co-parenting relationship (Lechowicz et al., 2019; Lundahl et al., 2008; Tully et al., 2017). Parenting programs have also begun to address factors that influence fathers’ attendance, such as including fathers as equal co-parents, focusing on child development and practical skills, adopting a strength rather than deficit approach, communicating information on evidence to support the program and qualifications of facilitators, and providing flexible program time and location (Lechowicz et al., 2019; Tully et al., 2017).

More broadly, program developers and researchers are aware that different intervention components resonate with different parents, and that parents can implement behavioural skills more consistently and effectively when emotionally regulated themselves (Maliken & Katz, 2013). Many BPT programs have therefore evolved beyond sole focus on behavioural skills (e.g., play, praise, limits) to incorporate cognitive components that address parents' attributions, relationships, and emotional wellbeing (e.g., coping strategies, anger management, partner relationships, mindfulness) (Donovan et al., 2022b; Sanders et al., 2014). Including both behavioural and cognitive components is argued to improve engagement, implementation and outcomes (Maliken & Katz, 2013; Webster-Stratton & Taylor, 2001).

The benefits of blending behavioural and cognitive components could be understood in terms of cascading and amplifying effects from addressing any individual variable (Borkovec et al., 2002). For example, in the process of helping parents to deliver clear instructions to their child (behavioural skill), parents are encouraged to pay close attention to the words they use, their own emotional state, the responses of their child, and their own thoughts and responses to the child (parent cognitive state), often by completing a behavioural monitoring sheet. The increase in child cooperation from the delivery of a clear instruction is then likely to improve parental self-efficacy, wellbeing, and attributions towards the child ("I can do it, I'm OK, my child is OK"). Increased positive parental self-efficacy, well-being, and attributions may then cascade into the effective implementation of other behavioural skills. Similarly, helping parents to be more present and emotionally regulated as they interact with their child (mindful cognitive state) is likely to lead to clearer and more effective instructions (behavioural skill), again potentially cascading across other areas of parenting.

The multi-component approach described above is also consistent with the concept of equifinality, namely that externalizing behavioural problems are heterogenous and multiply determined (Cicchetti & Rogosch, 1996). Multi-component programs have greater capacity to meet heterogenous aetiological pathways and family needs. However, over-burdened parents may not respond well to interventions that require attendance at additional modules, and the effectiveness of key behavioural components may be compromised if cognitive components are merely tacked on at the end of the intervention (Kazdin, 2008). There is also research suggesting that less can sometimes be more (Kaminski & Claussen, 2017). A recent cluster meta-analysis of parenting programs ($N = 197$) found that behaviour management programs were ranked above programs that combined behaviour management with other components, although the authors noted that mindfulness techniques had not been included in their review (Leijten et al., 2022). The challenge then is how to integrate multiple components with clinical parsimony, theoretical integrity, high parent acceptability, and low parental burden.

To address this challenge, here we report on ten years of data from an enhanced BPT group intervention, Confident Carers Cooperative Kids (CCCK), that blends behavioural skills and mindfulness, and uses imagery to help parents to understand and integrate multiple components within the 8-week program (Donovan et al., 2022a). An earlier pilot study ($N = 34$) compared CCCK outcomes at a university clinic versus a community organisation supporting high-risk families. The study found significant pre- to post-intervention improvements across measures of child behaviour, parent wellbeing, parenting approach, and mindful parenting, with large effect sizes across most measures and greater improvements in child behaviour for the high-risk families (Donovan et al., 2022a). The aim of the current study was to replicate these findings

with a larger sample to allow comparison of outcomes for mothers versus fathers, and parents who attended as teams versus individually. We wanted to thereby establish preliminary outcomes and acceptability for CCK in parents of children aged 3-12 years with externalizing problems, using a quasi-experimental design. We hypothesised that mothers and fathers would show similar pre- to post-intervention improvements in parent-reported child behaviour problems, parental wellbeing, parenting approach, and mindful parenting due to the enhanced BPT approach. We also predicted that parents attending as parent-teams would improve more than parents attending individually (Panter-Brick et al., 2014).

Methods

Participants

Permission was gained from the University Human Research Ethics Committee (HREC 2020/010) to use an archival de-identified dataset of 377 parents who had attended CCK in an outpatient university clinic in regional Australia between July 2009 and June 2019. Parents had either self-referred or been referred by a health professional for support in parenting a child with externalizing behaviour problems. Inclusion criteria for the intervention were: (a) parenting at least one child aged 3 to 12 years presenting with an externalizing problem, (b) at least one day of contact with their child/ren each week, (c) absence of untreated severe mental health difficulties within parents, (d) initial commitment to attend each week of the intervention, and (e) ability to communicate in English. Parents completed basic demographic information, post-intervention group evaluations, and pre- and post-intervention measures as part of routine service audit.

From the total dataset, 219 parents had completed measures at both pre- and post-intervention, 75 had completed only pre-intervention measures, 44 had completed

only post-intervention measures, and a further 39 parents were removed from the study due to missing data (see Figure 1 for details). From the remaining study sample of 338 parents, there were 223 mothers (211 biological, six foster, five grand, one step) and 115 fathers (106 biological, six step, two grand, one foster). One hundred and ninety-one parents attended as parent-teams and 147 attended individually. Most parent-teams were spouses. One was a three parent-team that included a grandmother. Most parents attending individually were biological parents; four were grandparents, two were stepfathers, and two were foster mothers. Parents were mostly mothers of boys, living in two-parent families of middle or above income. Children had an average age of seven years. The sample demographic was consistent with the broader Australian regional population in terms of family income, marital status, and one-parent or couple family status (Lawrence et al., 2015). Most families identified as Australian, with about 15 percent identifying as mixed Australian and other nationality, and 2.4 percent other nationality (see Table 1 for details).

[Insert Figure 1 here]

[Insert Table 1 here]

Intervention

CCCK is a manualised 8-week mindfulness and imagery enhanced behavioural parenting group program that includes parent workbooks, therapist manuals and accompanying video materials, and fits within *third wave* behavioural and cognitive therapies (Donovan & Konza, 2021, unpublished treatment manuals; Hayes, 2016).

CCCK establishes a foundation of parenting principles in weeks 1-2 that then guides *how* and *why* parents use the behavioural skills that are covered during weeks 3-6, with emphasis on integration, maintenance, and self-compassion during weeks 7-8 (see Table 2 for overview and Donovan et al, 2022a for details). The symbolic visual metaphor of

heat in family life is conceptualised as a barometer for behavioural dysregulation (*Bushfire Metaphor*), and parents are helped to identify *fuel* (biological factors), *heat* (environmental factors) and *oxygen* (parent-response factors) that contribute to *fuelling the fire*. Further visual images are designed to help parents to notice and step-back from thoughts, feelings, sensations, and actions associated with their internal struggle during difficult family moments (*Mind Struggle, Power Struggle*). A guided mindfulness exercise is designed to unearth parents' deeply held values to guide their parent-child interactions (*Parenting Compass*) (Hayes, 2016). Parents interact through play, praise, limits, and consequences based on their own parenting values, and are guided by principles of *not fuelling the fire* and instead *growing the green* within their parent-child and family relationships. The program underwent revision in 2013 to increase the mindfulness components with no change in overall program length.

Symbolic positive imagery described above uses images to represent salient co-created therapeutic content, such that a simple image or metaphor can activate a rich network of associations and meaning through right-hemisphere activation (Bennett-Levy et al., 2020; Gilbert, 2013; Harvey et al., 2014; Schore, 2019). For example, a parent can create an image that symbolises their preferred parent-self, link this to recent moments of positive parent-child interaction, and then recall the image later to help navigate a difficult moment in parenting. The positive symbolic image can activate the associative network of positive parent-self and parent-child interactions, and thereby help the parent to act in preferred ways when under pressure.

[Insert Table 2 here]

Procedure:

Parents contacting the university clinic with a child presenting with externalizing behavioural problems were offered CCK during each of four annual school terms

between July 2009 and June 2019. Parents attended eight weekly two-hour CCK group sessions comprising four to 15 parents (mean group size of 7.5 parents) and three facilitators. Partners or other co-parents were actively invited to the pre-group meeting and encouraged to attend the group program with the primary contact parent, and groups were mostly offered in evenings. CCK was facilitated by graduate psychologists undertaking clinical psychology training who had been trained in program delivery via a two-day workshop by the program creators (GK and MD), including demonstration and practice of all CCK components. Weekly supervision was provided throughout the intervention by one of the program creators (MD) to increase program fidelity.

Parents completed standard pen-and-paper baseline measures at a pre-group meeting that determined suitability and identified risks or other needs. The same measures were completed at the end of week eight, and parents who missed the final session were sent pen-and-paper measures with a self-addressed stamped envelope for return post. Parents were contacted by telephone and/or email if they missed a session and were offered up to two one-hour individual catch-up sessions during the program. Catch-up sessions were classified as equal to session attendance. Parents were encouraged to attend a post-group individual session to discuss progress, review pre- and post-intervention scores, and consider on-going needs.

Following ethical approval, data were extracted and de-identified by clinic administrators during March to April 2020 to create the research database that also included extracted de-identified demographic and attendance information. The de-identified database was provided electronically to the research team who were not directly involved in running CCK groups or collecting data beyond weekly clinical supervision of CCK facilitators by MD.

Measures

Eyberg Child Behaviour Inventory.

The Eyberg Child Behaviour Inventory (ECBI; Robinson et al., 1980) was used as a parent-report measure of externalizing behaviour and can be used for children aged 2 to 16 years. The ECBI includes 36 items of commonly reported behaviour problems, for example “Refuses to go to bed on time”. The short clear statements are easily understood making the measure more accessible to a range of parents. Parents rate the intensity at which these problems occur, ranging from 1 “never” to 7 “always” (ECBI-I), and answer Yes/No about whether this is problematic (ECBI-P). Total scores are generated for the ECBI-I and ECBI-P with established cut-offs of ECBI-I (>131) and ECBI-P (>15) that denote clinical significance. Both ECBI subscales have good internal reliability ($\alpha > .90$) and adequate external validity (Boggs et al., 1990; Colvin et al., 1999).

Depression Anxiety and Stress Scale.

The Depression Anxiety and Stress Scale 21 (DASS-21; Lovibond & Lovibond, 1995) was used to measure parental wellbeing. Parents rate 21-items which lead to three subscales: depression, anxiety, and stress, with higher scores indicating greater distress. The DASS-21 has demonstrated high levels of internal consistency for depression ($\alpha = .88$), anxiety ($\alpha = .82$), stress ($\alpha = .90$), and total score ($\alpha = .93$), and possesses sufficient convergent and discriminant validity (Henry & Crawford, 2005; Lovibond & Lovibond, 1995). Subscale ranges are used clinically to define normal, mild, moderate, severe, and extremely severe categories. Here we used moderate and above ranges to indicate clinically significant problems with parent wellbeing.

Parenting Scale.

The Parenting Scale (PS; Arnold et al., 1993) was used as a measure of parenting approach. Parents complete 30-items across three subscales of discipline style: over-reactivity (ten items; authoritarian discipline, irritability), laxness (eleven items; permissive discipline), and verbosity (seven items; over-wordy instructions or reliance on talking). Parents rate the probability of using a specific discipline strategy along a 7-point likert scale, with lower scores indicating a more adaptive parenting approach. For example, in response to the statement “When my child misbehaves” (over-reactivity), parents rate from “I raise my voice and yell” (7), to “I speak to my child calmly” (1). The scale includes items that are reversed scored. The scale has good internal consistency ($\alpha = .84$), good test-retest reliability ($r = .81 - .86$), and good discriminant validity (Arnold et al., 1993; Rhoades & O’Leary, 2007). Clinically significant cut-offs have been established for the subscales based on average ratings: laxness > 3.5 , over-reactivity > 4.0 , verbosity > 3.1 , and total > 3.2 (Arnold et al., 1993). All three subscales and total score were included in the current analyses, with awareness of concerns about the psychometric qualities of the verbosity subscale (Salari et al., 2012).

Interpersonal Mindfulness in Parenting Scale.

The Interpersonal Mindfulness in Parenting Scale (IM-P; Duncan, 2007) was used as a measure of mindful parenting. The IM-P has been validated within Australia and the revised version uses 29 of the original 31-items. Parents rate themselves across six dimensions of mindful parenting: non-judgmental acceptance of parent functioning (NJAPF, six items; “When I do something as a parent that I regret, I try to give myself a break”), emotional awareness of self (EAS, four items; “When I’m upset with my child, I notice how I am feeling before I take action”), emotional awareness of child (EAC, three items; “It is hard for me to tell what my child is feeling”), listening with full attention (LFA, five items; “I spend close attention to my child when we are spending

time together”), emotional non-reactivity in parenting (ENRP, five items; “I often react too quickly to what my child says or does”), and compassion for child (CC, six items; “I am kind to my child when he/she is upset”) (Burgdorf & Szabó, 2021). Higher scores indicate greater levels of mindful parenting, with averaged scores ranging from one to five in each of the subscales. The scale includes items that are reversed scored. The scale has good internal consistency ($\alpha = .89$ for total, and $\alpha = .77$ to $.87$ for subscales) and construct validity (Burgdorf & Szabó, 2021; de Bruin et al., 2014).

Acceptability.

Retrospective acceptability was determined based on parent satisfaction ratings, parent feedback and session attendance, three key areas of acceptability (Sekhon et al., 2017). Parents completed pen-and-paper anonymous post-intervention evaluations at the end of the final session, rating 16 different CCK intervention components on a 0-10 scale (0 = *extremely unhelpful*, 10 = *extremely helpful*) and providing qualitative feedback on: (1) *changes you have noticed as a result of taking part in CCK*, (2) *main ideas that you want to hold onto from CCK*, (3) *changes you would recommend for the group*, and (4) *components you would omit*. Session attendance was calculated by totalling weekly attendance and catch-up sessions.

Data Analysis

All statistical analyses were conducted using SPSS version 28.0 (IBM Corp., 2021). Parents who attended at least one session were included in the analyses. Most measures had incomplete data for between 0.2 to 5 percent of participants, however the IM-P had 12 - 16 percent missing data due to only being included as a standard measure from 2013. Little’s MCAR test confirmed missing values occurred at random ($\chi^2(54,165) = 44,099.7, p = 1.000$). Modal imputation was conducted for missing items for each scale. Participants with complete scales missing were omitted for that scale in the analyses.

Analyses found similar pre- to post-intervention significance and effect size values when all participants were compared with a sample that included only one parent from each family. Therefore, all participants with completed pre and post measures were included in analyses to capture data on parent-teams and fathers, despite risks with dependency of data (Kenny, 2011). Following inspection of the data via descriptive statistics, Mauchly's, Box's, and Levene's test statistics were used to test the assumptions of sphericity, and homogeneity of covariance and error covariance. The assumptions for a mixed model ANOVA were met for all measures except DASS, which then met normality assumptions following log transformation. Separate mixed ANOVAs examined differences following intervention across dependent variables, with Time and Variable Subscale as within-subject factors, and Parent Role (mothers and fathers) as the between-subjects factor. These analyses were repeated with Attendance Status (parent-team and individual) as the between-subjects factors. For child behaviour, scores from ECBI-I and ECBI-P were analysed separately due to scale measurement differences (possible range 36-252 versus 0-36, respectively). Bonferroni adjustments were applied across all relevant analyses to minimise possibility of type 1 error. Greenhouse-Geisser adjustments were made to the degrees of freedom as needed. Transformed variables were used within the mixed ANOVA to calculate F and p values for the DASS. Partial eta squared effect sizes were generated from the mixed ANOVA, with accepted values of small $\eta^2 = 0.01$, medium $\eta^2 = 0.06$, and large $\eta^2 = 0.14$. Additional t -tests (two-tailed) were used to determine magnitude of change for differences between variables and are reported where relevant. Effect sizes were reported from t -tests, with accepted values for Cohen's d of small $d = 0.2$, medium $d = 0.5$, and large $d = 0.8$. For Chi-square analyses, effect size was reported in terms of small $\phi = 0.1$, medium $\phi = 0.3$ and large $\phi = 0.5$. Clinical significance was calculated

where cut-offs were available, and reliable change was calculated across all outcome measures (Jacobson & Truax, 1991). Power analyses were not completed due to the archival nature of the dataset.

Results

Baseline Demographic and Outcome Measures across Samples

Table 1 presents demographic characteristics of parents who completed measures at one or both time-points, and the total sample. Table 3 compares baseline means and standard deviations for parents who completed measures at one or both timepoints. Independent *t*-tests (two-tailed) and Chi-square tests were used to determine if there were differences between parents who completed measures at one or both time-points, as only the latter could be included in the main repeated measures analyses. There were no significant differences found between groups in terms of: child age, gender, medication use, age of problem onset, parent's age, education level, employment status, marital status, one or two-parent family status, and number of children in family (see Table 1). There were no significant differences at baseline on parent ratings of frequency of child problem behaviours, parental wellbeing, parenting approach, and mindful parenting (see Table 3). However, parents who completed measures only at one time point were more likely to be fathers than mothers, have seen more professionals in the past, hold a concession card, have lower total family income, attend less sessions, and rate their children as having more intense behavioural problems. Overall, there were limited differences between parents completing measures at one or both timepoints, and there is sufficient generalisability to conduct repeated measures analyses without replacing missing values for whole scales.

[Insert Table 3 here]

To determine demographic and baseline differences between parent gender, the sample was split by parent role into fathers and mothers, with each category including biological, step, foster and grandparent variations. Independent *t*-tests (two-tailed) and Chi-square tests were conducted for continuous and categorical variables, respectively, to determine baseline and demographic differences. Fathers and mothers were found to attend a similar number of sessions (fathers $M = 6.8$, mothers $M = 6.7$; $t(285) = 0.35$, $p = .698$, $d = 0.05$), however fathers were less likely to complete measures at both time-points than mothers ($X^2(3,338) = 25.16$, $p < .001$, $\phi = 0.27$). Mothers were more likely to hold concession cards ($X^2(1,288) = 7.92$, $p = .005$, $\phi = 0.17$), and fathers were more likely to be in employment ($X^2(2,212) = 59.08$, $p < .001$, $\phi = 0.20$), and to attend as a parent-team rather than individually ($X^2(1,338) = 30.02$, $p < .001$, $\phi = 0.30$). There were no significant baseline differences between mothers and fathers in reporting: one or two-parent family, marital status, family size, family income, parent education level, parent age, parent race, and child age and gender. In terms of baseline measures, mothers rated higher than fathers on intensity of child behaviour ($t(284) = 2.62$, $p = .009$, $d = 0.34$), frequency of child behaviour ($t(275) = 4.96$, $p < .001$, $d = 0.66$), parental stress ($t(279) = 2.70$, $p = .007$, $d = 0.35$), and compassion for their child ($t(238) = 3.67$, $p < .001$, $d = 0.52$). Mothers rated themselves lower than fathers in terms of non-judgmental acceptance of parenting function ($t(238) = -3.61$, $p < .001$, $d = -0.52$). There were no significant differences between mothers and fathers at baseline related to parental depression, parental anxiety, parenting approach, and other subscales of mindful parenting. Overall, mothers and fathers were similar across most demographic variables and baseline measures.

Intervention Effects

The main aim of the study was to determine preliminary outcomes and acceptability for CCK by comparing the intervention across time and between mothers and fathers, and between parent-teams and individuals. Most measures and subscales demonstrated adequate internal reliability despite many subscales with limited items (see Table 3; George & Mallery, 2019). The verbosity subscale from the PS demonstrated poor internal reliability ($\alpha = .55$), similar to previous studies (Salari et al., 2012), however was retained in the analyses.

Table 4 presents mixed model ANOVA findings for the main effects and interactions for parent role. Untransformed estimated marginal means and standard errors relevant to the analyses performed are reported in Table 5 to allow comparison with other studies. Reliable change and clinical significance are reported in Table 6 across all variables. Figures 2 and 3 display mean ratings for mothers and fathers from pre- to post-intervention across outcome measures.

[Insert Tables 4, 5 and 6]

[Insert Figures 2 and 3]

Time: Pre- to Post Intervention.

Mixed ANOVAs were conducted to understand pre- to post-intervention changes in dependent variables. Significant main effects of Time were found across all outcome measures (see Table 4). Effect sizes were large for parent-reported child behaviour, parenting approach and mindful parenting. Effect sizes were medium to large for parent wellbeing. Following attendance at CCK, parents reported significantly less frequent and less intense child behaviour problems, and significantly improved parental wellbeing, parenting approach, and mindful parenting.

Reliable change analyses on total measure scores found roughly half of parents were rated as improved, and fifty to seventy percent of parents had recovered by post-

intervention (see Table 6). Deterioration was low (0.5 - 2.2%) except for parent wellbeing (19.7%). Approximately three-quarters of parents rated clinically significant problems at baseline with their child's behaviour (165/212 and 137/200) and their parenting approach (158/213), and seventeen percent (36/208) rated their overall wellbeing as problematic with variation in clinical significance across subscales (stress 26.9%, depression 18.8%, anxiety 12.0%, total 17.3%). Variation in clinical significance between subscales at baseline was also apparent for parenting approach (verbosity 90.6%, over-reactivity 72.3%, laxness 27.2%, total 74.2%). There are no published clinical cut-offs for the IM-P.

Parent Role: Mothers and Fathers.

Mixed ANOVAs also explored whether mothers and fathers provided similar ratings on outcome measures. There was a main effect of Parent Role for child behaviour problem frequency and parenting approach, with small to medium effect size. Consideration of the estimated marginal means (Table 4) revealed that mothers rated more frequent child problems than fathers ($p = .001$), and fathers rated themselves higher for problematic parenting approach than mothers ($p = .021$). There was no effect of Parent Role for child behaviour intensity, parent wellbeing, and mindful parenting.

Variable Subscale.

In terms of overall differences in subscale ratings within each dependent variable, the mixed ANOVA found a main effect of Variable Subscale across all relevant measures, with large effect sizes. For the DASS, participants overall endorsed more Stress than Depression and both were higher than Anxiety. Post hoc comparisons were all significant at $p < 0.01$. For the PS, participants overall endorsed more Verbosity than Over-reactivity, and both were higher than Laxness, with all post hoc comparisons significant at $p < 0.01$. For the IM-P, parents rated themselves higher in terms of

Compassion for Child than any other subscale (all contrasts $p < .001$), and lower in terms of Non-judgmental Acceptance of Parenting Function than any other subscale (all contrasts $p < .001$). Parents also rated Emotional Awareness of Child higher than LFA, EAS and ENRP (all at $p < .001$).

Interaction: Time and Parent Role.

The mixed ANOVA found no significant interaction between Time and Parent Role for any dependent variable. Mothers and fathers improved similarly from pre- to post-intervention across all measures.

Interaction: Time and Variable Subscale.

In relation to changes in subscales from pre- to post-intervention, the mixed ANOVA found significant interactions between Time and Variable Subscale across all relevant measures, with small to medium effect sizes. Paired-sample t -tests (two-tailed) were conducted using pre- and post-intervention ratings for DASS, PS and IM-P. Parents rated their pre- to post-intervention improvements in wellbeing higher for Stress than Anxiety, and Depression than Anxiety (all contrasts $p < .001$). Parents rated their pre- to post-intervention improvements in parenting approach higher in terms of Verbosity than Over-reactivity, Over-reactivity than Laxness, and Verbosity than Laxness ($p < .001$ for all). Parents rated their pre- to post-intervention improvements in mindful parenting higher in terms of Emotional Awareness of Self than any other subscale ($p < .001$ for all except $p = .038$ for NJAPF), Non-Judgmental Acceptance of Parenting Function higher than CC, EAC and LFA ($p < .005$), and Emotional Non-Reactivity in Parenting higher than EAC and LFA ($p < .05$).

Interaction: Parent Role and Variable Subscale.

The mixed ANOVA showed no significant interactions between Parent Role and Variable Subscale for measures of child behaviour, parent wellbeing, and parenting

approach. Mothers and fathers rated measure subscales similarly in these areas. There was a significant interaction for mindful parenting, with small effect size. Paired-sample *t*-tests (two-tailed) using mean IM-P subscale ratings across time found both mothers and fathers rated Compassion for Child higher than any other subscale (all contrasts $p < .001$), and Non-Judgmental Acceptance of Parenting Function lower than any other subscale (all contrasts $p < .005$). However, mothers rated Emotional Acceptance of Child higher than EAS, ENRP and LFA (all contrasts $p < .001$), whereas fathers rated EAC higher than EAS ($p = .004$) and ENRP ($p = .011$), but not LFA ($p = .150$).

Interaction: Time and Parent Role and Variable Subscale.

There were no significant three-way interactions between Time and Parent Role and Variable Subscale.

Other Intervention Effects

Parent-teams

A further aim of the study was to compare intervention outcomes between parents who attended as a team ($n = 191$) with those attending individually ($n = 147$). Table 7 presents findings from a mixed ANOVA with Time and Variable Subscale as within subject factors, and Attendance Status (2 levels: parent-team or individual) as the between subject factor. The main effect of time was significant for all outcome measures, with large effect sizes. There was no main effect for Attendance Status across all measures. There was no significant interaction between Attendance Status and Time for any measure. Parents attending as teams and parents attending individually improved similarly from pre- to post-intervention on measures of child behaviour, parent wellbeing, parenting approach, and mindful parenting. The main effect for Variable Subscale and interaction effect for Variable Subscale by Time were significant across all relevant outcome measures, similar to the Parent Role findings described

above. The interaction for Variable Subscale by Attendance Status and the three-way interaction were non-significant across all measures.

[Insert Table 7]

Acceptability

Parent satisfaction ratings across all 16 components averaged 8.6/10 ($N = 130$, range 5.9 - 10). Behavioural skill components were generally rated positively, including mindful play (9.1), effective praise (9.2), clear instructions (8.9), household rules (8.7), planned ignoring (8.6), consequences (8.6), problem-solving (8.4), and time-out (8.1). Cognitive components that introduced metaphors, images and mindfulness were also rated positively, including bushfire conceptualisation (8.8), parenting compass (8.7), power/mind struggle (8.6), following parent values (8.5), and living with mind-struggle (8.1). Being in a group was rated highly (9.1), however role plays (7.6) and video clips (7.9) received lower ratings. Two-tailed paired t -tests found no significant difference on average scores for behavioural components compared with cognitive components ($M = 8.75$, $SD = 0.90$ versus $M = 8.56$, $SD = 1.19$; $t(129) = 1.72$, $p = .087$, $d = 0.15$).

Parents described changes from attending CCCK most often in terms of: greater cooperation and less tantrums from their child/ren (41% of parents, $n = 84/205$), family life as calmer (36.6%), having effective strategies and tools (33.7%), being more aware of their own feelings and behaviours (20%), feeling closer and more accepting towards their child/ren (19.5%), feeling confident as a parent (15.6%), and family life as happier and more enjoyable (11.2%). Several parents (8.8%) commented on greater teamwork/cohesion with their partner. There were also references to mindfulness-related concepts such as, “more mindful and present”, “values clearer”, and “can control my emotions through mindfulness and mind-struggle”. There were 50 references to metaphors, including “taking note of bushfire oxygen, heat and fuel”, “aware of my

own parenting compass”, and “see power struggle for what it is”. Only one parent reported “none” in terms of changes, while another said, “it is working even though I was sceptical”. The ideas parents reported most commonly that they wanted to hold onto from the program included: mindful play (38.4% of parents, $n = 53/138$), parenting values/compass (31.2%), effective praise (31.2%), clear instructions (18.8%), consequences (18.8%), avoiding power/mind-struggle (16.7%), bushfire model (15.9%), household rules (13%), planned ignoring (8.7%). Recommendations included improving the quality of video materials, 2.5-hour sessions, less parent role plays, and better management of group discussions, although most parents (56.8%) reported “none” and indicated the program was “great/good”. In response to the question on components parents would omit, nearly all (91.5%, $n = 183/200$) wrote ‘none’. These positive ratings and comments are consistent with the strong attendance by both mothers and fathers, with over 85 percent attending six or more sessions and average attendance of 6.7/8 sessions.

Discussion

The main aim of our study was to establish whether a multi-component mindfulness and imagery enhanced BPT group program could produce similar pre- to post-intervention improvements for fathers as mothers, and whether parent-teams would improve more than parents attending alone. In support of our first hypothesis, we found significant and equivalent improvements for fathers and mothers in parent-reported child externalizing problems, parent wellbeing, parenting approach, and mindful parenting, with large effect sizes. These strong outcomes are encouraging given that naturalistic studies with larger samples tend to find reduced effects (Weisz et al., 2015). However, we did not find support for our second hypothesis of improved outcomes for parent-teams over parents attending individually.

Previous BPT research has reported poorer engagement and outcomes for fathers compared with mothers, and our equivalent attendance and improvements for fathers could be attributed to intervention process factors shown to encourage father engagement, such as efforts to involve all active parents and offering the group in evenings within a university setting and with trained facilitators (Lundahl et al., 2008; Tully et al., 2017). Positive engagement and outcomes for fathers could also be attributed to the enhanced multi-component content, providing greater breadth to meet heterogenous aetiology and needs (Cicchetti & Rogosch, 1996). Parents' positive anonymous post-intervention ratings and qualitative feedback implied that behavioural components (skills) and cognitive components (mindfulness, imagery, metaphors) were perceived equally well. It was not possible to determine the impact of individual components, and whether ratings were similar across mothers and fathers, however over ninety percent of participants reported that they would not omit any program components. Inclusion of visual imagery and metaphors has been shown to improve outcomes for social anxiety (McEvoy et al., 2015), and has been linked to higher impact for females than males within marketing research (Chang et al., 2018). More finely controlled research including use of micro-trials would be needed to clarify whether mothers and fathers respond similarly to various CCK components, and the degree to which this influences outcome (Leijten et al., 2015).

Our finding that parents who attended individually improved to the same extent as parents who attended as parent-teams needs to be considered alongside limitations associated with the archival nature of the dataset. Fathers attending as part of a couple were less likely to complete both pre- and post-intervention measures and were therefore proportionally under-represented in the repeated measures analyses. It is also possible that parents excluded due to lack of data ($n = 19$) included male partners of

mothers attending the intervention, which was not adequately captured by the dataset. Furthermore, the emphasis on CCK participants discussing concepts and strategies with non-attending parents throughout the intervention may have minimised the impact of parents who attended alone (Tully et al., 2017).

Three quarters of parents reported clinically significant problems with their child's behaviour and their parenting approach at baseline, consistent with a parenting intervention for externalizing presentations and indicating a high level of need. Fifty to seventy percent of these families were classified as recovered at post-intervention, and over fifty percent had achieved reliable change. These individual rates of clinically meaningful change within our study are favourable when compared with results from other BPT interventions, suggesting benefits from our mindfulness and imagery enhancements and the possible role of cascading and amplifying effects (Borkovec et al., 2002; Sheldrick et al., 2001; Thijssen et al., 2017). Consistent with existing parenting research, parents reported higher levels of stress and depression than anxiety at baseline, and showed larger improvements in stress and depression than anxiety at post-intervention (Furlong et al., 2012). Only a fifth to a quarter of parents met clinical significance for baseline levels of depression and stress, respectively, and mean baseline stress ratings were two standard deviations above Australian population norms, whereas depression and anxiety were within normal limits (Crawford et al., 2020). Deterioration was negligible (0.5 – 3.3%) except for overall parent wellbeing, which was comparatively high at nearly twenty percent. Rates of deterioration were lower for DASS subscales (3.8 - 6.3%), perhaps suggesting that the cut-off for DASS total was too low. It is also likely that parents may have continued to experience difficult life circumstances outside of parenting which could not be addressed within an 8-week program. Smaller effect size improvements in parental wellbeing (particularly anxiety)

compared with other dependent variables is consistent with larger effects being demonstrated for areas explicitly targeted by the CCK intervention, although could also be accounted for by less room for improvement due to lower baseline ratings (Dedousis-Wallace et al., 2021). In relation to parenting approach, over seventy percent of our sample met clinical significance for over-reactivity, and only a quarter for laxness. Accordingly, over-reactivity improved more than laxness. Ninety percent met clinical significance for verbosity at baseline, however caution is required due to poor reliability for this subscale (Salari et al., 2012). Within mindful parenting, it was interesting to note that parents rated largest improvements in terms of emotional awareness of self and non-judgmental acceptance of parenting function. Such changes are consistent with post-intervention qualitative feedback about being more calm, aware, and confident as parents. Many of the above subtle differences underline the importance of looking at subscales rather than overall scale ratings, and provide clues towards mechanisms of change which was beyond the scope of this study.

Our finding that baseline parent ratings of child behaviour problems and stress were higher for mothers than fathers is consistent with previous studies (e.g., Langberg et al., 2010; Riina & Feinberg, 2012). Contrary to Rhoades and O'Leary (2006), we found that fathers rated their own parenting approach as more problematic than mothers. While previous mindful parenting studies have reported higher mindfulness ratings for mothers than fathers, we discerned no overall difference, and instead found both parents rated compassion towards their child higher and non-judgmental acceptance of their parenting lower than other subscales (Medeiros et al., 2016; Parent et al., 2016). There was also an interaction effect indicating mothers were more likely than fathers to rate emotional awareness of their child higher than listening with full attention, however the effect size was small. Overall, the severity of difficulties reported for fathers as well as

mothers within our study implies each would have been motivated to change, which may also have contributed towards the equivalent outcomes for fathers and mothers (Dedousis-Wallace et al., 2021).

Limitations and Future Research

There were several limitations associated with using archival data from a naturalistic setting. The lack of a control group means that reported changes could be attributable to social desirability or other factors. We were limited to pre- and post-intervention self-report measures, and minimal granulation of data in terms of demographic factors, including composition of parent-teams. Accurate monitoring of session fidelity, homework compliance, co-interventions, and pre-intervention drop-out was not undertaken. There was no measure of parent-child relationship and the impact from group processes was only measured via post-intervention parent satisfaction ratings.

Future research needs to explore mechanisms of change to understand whether changes to parent-reported child behaviour can be attributed to improved parental reactivity, laxness, awareness, acceptance, reduced stress, or other factors. Qualitative research could help understand the parents' perceived benefits and use of behavioural and cognitive program components. It would also be interesting to confirm whether enhanced BPT programs can meet a broad range of socio-demographic needs by exploring predictors of treatment outcome. Finally, the positive outcomes achieved by our study need to be confirmed via a randomised controlled trial, preferably using multiple informant measures, follow-up measures, fidelity checks, closer attention to demographic variables, and in real-world settings beyond over-sight by program creators. Despite limitations associated with naturalistic research, our study has provided support for integrating imagery and mindfulness within a brief behavioural

parenting program and suggests that enhanced BPT can meet the needs of fathers as well as mothers.

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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Mark Donovan co-created the intervention, co-designed the study, analyzed the data, wrote the first version of the manuscript, and revised subsequent versions. Emma Barkus, Jane Herbert and Judy Pickard reviewed and revised the design, statistical analyses, and each version of the manuscript. Gregory Konza co-created the intervention and reviewed and revised the final manuscript. All authors approved the submitted version.

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Table 1:

Demographic Characteristics and Statistical Values for Parents who Completed Measures at One (Pre or Post) or Both Time Points (Pre and Post)

Demographic Characteristic	Specifier/s	Total Sample (<i>N</i> = 338)	Pre or Post (<i>n</i> = 119)	Pre and Post (<i>n</i> = 219)	Statistical Values ¹	
					<i>t</i> (df)	<i>p</i> , <i>effect size</i> ²
Child Gender	Male (%)	236 (70.4%)	85 (73.3%)	151 (68.9%)	0.68 (1,335)	.451, -0.05
Child Age	Mean (<i>SD</i>)	7.1 (2.2)	7.3 (2.2)	6.9 (2.2)	-1.33 (331)	.183, -0.15
Child Medication	On medication (%)	68 (25.3%)	21 (26.3%)	47 (24.9%)	0.06 (1, 269)	.878, -0.02
Medication Reason	Behaviour/Hyperactivity	37 (52.1%)	8 (36.3%)	29 (59.1%)	4.53 (2,71)	.111, 0.25
	Medical	23 (32.4%)	8 (36.3%)	15 (30.6%)		
	Emotional/Other	11 (15.5%)	6 (27.2%)	5 (10.2%)		
Problems Started	Birth	36 (16.1%)	11 (18.3%)	25 (15.2%)	1.65 (3,224)	.649, 0.09
	< 2 year old	83 (37.1%)	19 (31.7%)	64 (39.0%)		
	3-5 year old	55 (24.6%)	14 (23.3%)	41 (25.0%)		
	5+	50 (22.3%)	16 (26.7%)	34 (20.7%)		
Past Prof. Involved ³	Mean (<i>SD</i>)	2.7 (1.5)	3.0 (1.4)	2.6 (1.5)	-2.03 (246)	.043*, -0.27
Parent Role ⁴	Mothers (%)	223 (66.0%)	65 (54.6%)	158 (70.9%)	10.55 (1,338)	<.001***, 0.18
Parent Age	Mean (<i>SD</i>)	39.0 (6.9)	38.6 (6.9)	39.1 (6.9)	0.39 (229)	.697, 0.06
Parent Race ⁵	Australian	238 (82.6%)	74 (85.1%)	164 (81.6%)	0.53 (2,288)	.833, 0.04
	Australian + Other	43 (14.9%)	11 (12.6%)	32 (15.9%)		
	Other	7 (2.4%)	2 (2.3%)	5 (2.5%)		
Education Level	School	23 (14.9%)	7 (12.7%)	27 (15.6%)	1.95 (3,288)	.589, 0.09
	Certificate/Diploma	104 (45.6%)	28 (50.9%)	76 (43.9%)		
	Undergraduate	49 (21.5%)	13 (23.6%)	36 (20.8%)		
	Postgraduate	41 (18%)	7 (12.7%)	34 (19.7%)		
Employment Status	Not employed	52 (24.5%)	8 (17.4%)	44 (26.5%)	3.65 (2,212)	.159, 0.13
	Part-time	83 (39.2%)	16 (34.8%)	67 (40.4%)		

Demographic Characteristic	Specifier/s	Total Sample (<i>N</i> = 338)	Pre or Post (<i>n</i> = 119)	Pre and Post (<i>n</i> = 219)	Statistical Values ¹	
					<i>t</i> (df)	<i>p</i> , effect size ²
	Full-time	77 (36.3%)	22 (47.8%)	55 (33.1%)		
Concession Card	Yes	75 (26%)	32 (35.2%)	43 (21.8%)	5.75 (1,288)	.021*, -0.14
	No	213 (74%)	59 (64.8%)	154 (78.2%)		
Marital Status	Married/Defacto	240 (85.1%)	69 (83.1%)	171 (86.4%)	0.413 (2,282)	.824, 0.04
	Separated/Divorced	22 (7.8%)	7 (8.4%)	15 (7.5%)		
	Other	20 (7.1%)	7 (8.4%)	13 (6.5%)		
Family Type	Couple	249 (88.6%)	74 (87.1%)	175 (89.3%)	0.29 (1,281)	.683, 0.03
	One parent	32 (11.4%)	11 (12.9%)	21 (10.7%)		
Family Income ⁶	Low	41 (14.7%)	19 (22.9%)	22 (11.3%)	6.24 (1,278)	.012*, -0.15
	Middle/High	237 (85.3%)	64 (77.1%)	173 (88.7%)		
Family Size	Children - <i>M</i> (<i>SD</i>)	2.3 (0.8)	2.3 (0.8)	2.3 (0.8)	0.29 (282)	.772, 0.04
Sessions Attend ⁷	Mean of 8 sessions (<i>SD</i>) ⁸	6.7 (1.6)	5.6 (2.2)	7.2 (0.9)	9.01 (285)	<.001***, 1.15
Attend Status	Mothers attend in team	101 (29.3%)	22 (18.5%)	79 (36.1%)	15.67 (3,338)	.001**, 0.22
	Fathers attend in team	90 (26.6%)	42 (35.3%)	48 (21.9%)		
	Mothers attend alone	121 (36.4%)	42 (35.3%)	79 (36.1%)		
	Fathers attend alone	26 (7.7%)	13 (10.9%)	13 (5.9%)		

* $p < .05$, ** $p < .01$, *** $p < .001$; ¹ *t*-test for continuous, Chi-square for categorical; ² effect size Cohen's *d* for *t*-test, reported using the commonly accepted criteria of small ($d = .2$), medium ($d = .5$) and large ($d = .8$) (Cohen, 1988), and Phi for Chi-square, using the commonly accepted criteria of small ($\phi = 0.1$), medium ($\phi = 0.3$) and large ($\phi = 0.5$); ³ Past professionals included private psychologist ($n=163$), general practitioner ($n = 161$), paediatrician ($n = 116$), school counsellor ($n = 109$), psychiatrist ($n = 39$), other ($n = 35$); ⁴ Parent Role includes biological, step, foster and grandparents; ⁵ Other race included European 10.4%, Asian 2.8%, American 2.4%; ⁶ Defined by Australian Bureau of Statistics (2021), low = <\$800 per week, middle/high combined due to bracket changes over 10 years; ⁷ Sessions Attend includes catch-ups (30 parents attended one catch-up, 6 parents attended two catch-ups); ⁸ 39.7 % parents attended 8/8 sessions, 29.3% attended 7 sessions, 17.1% attended 6 sessions, 5.2% attended 5 sessions, 1.4% attended 4 sessions, 3.5% attended 3 sessions, 2.1% attended 2 sessions, 1.8% attended 1 session).

Table 2:
CCCK Weekly Behavioural Skills, Mindfulness, and ACT¹ Components

Week	Title/Goal for Week	CCCK Components		Homework/Committed Action ¹
		Behavioural Skills	Mindfulness/ACT ¹ /Visual Imagery & Metaphor	
1	Understanding and preventing problem behaviours	Recognition of shared experiences, formulation of problem behaviours via coercive cycle, problem list	Bushfire metaphor formulation, power struggles (defusion), mind struggles (creative hopelessness, defusion)	Monitor child non-cooperation, complete bushfire worksheet, complete mind struggle worksheet, draw family
2	Becoming aware of your parenting values	Emotion coaching	Parenting compass (guided mindfulness, values-identification), doing what matters (choice point, committed action), wheel of noticing (observing self)	Notice parenting values, practice emotion coaching
3	Strengthening relationships	Attuned care-giving, balance between love and limits, play tips and traps	Mindful play, mindful describing, doing what matters	Monitor child cooperation, daily mindful play
4	Encouraging positive behaviours	Learned behaviour, praise & rewards,	Mindful eating/drinking, mindful praise, grounding exercise, 'feeding tiger cub' (defusion), doing what matters	Monitor praise and child's response, mindful play
5	Preventing misbehaviour	Setting limits, household rules, clear instructions, planned ignoring	Mindfulness of breath, mindful limits, 'drop the rope' (defusion), doing what matters	Monitor clear instructions, avoid arguments, complete family agreement, mindful play
6	Managing misbehaviour	Fight/flight/freeze, natural consequences, loss of privileges, time-out	Breathing space, mindful consequences, doing what matters	Monitor consequences, time-out plan, monitor mindful play
7	Managing difficult situations	Behaviour action plan, consolidation	Self-compassion break, mind struggle drawing (defusion), doing what matters	Complete behaviour action plan for high-risk problem, mindful play
8	Being the parent	Behaviour action plan, consolidation, relapse prevention	Sweet-spot guided mindfulness and drawing, doing what matters	

¹ACT = Acceptance and Commitment Therapy; Adapted with permission from Donovan et al. (2022a).

Table 3:

Means, Standard Deviation and *t*-test Statistical Values Comparing Parents Who Completed Measures at One or Both Time Points

Outcome Variable	N Pre/ Post	Reliability Coefficient α^1	Baseline <i>M (SD)</i>		Statistical Values	
			Pre and Post	Pre Only	<i>t</i> (df)	<i>p</i> , <i>d</i>
Child Behaviour						
Intensity	286/ 262	.91	151.49 (26.21)	160.79 (35.45)	-2.38 (284)	.018*, -0.32
Problem	276/ 252	.88	18.25 (7.05)	19.82 (8.73)	-1.55 (275)	.122, -0.21
Parent Wellbeing						
Depression	281/ 261	.90	3.60 (3.90)	4.40 (4.85)	-1.41 (279)	.161, -0.19
Anxiety		.84	2.11 (3.04)	2.53 (3.90)	-0.92 (279)	.358, -0.13
Stress		.87	7.01 (4.47)	7.29 (4.83)	-0.44 (279)	.657, -0.06
Total		.94	12.73 (9.92)	14.22 (12.18)	-1.03 (279)	.302, -0.14
Parenting Approach						
Over-reactivity	286/ 260	.72	3.71 (0.86)	3.62 (0.89)	0.83 (285)	.409, 0.11
Laxness		.82	2.96 (0.90)	3.03 (0.91)	-0.61 (285)	.546, -0.08
Verbosity		.55	4.09 (0.78)	4.10 (0.81)	-0.05 (285)	.957, -0.01
Total		.81	3.51 (0.56)	3.50 (0.58)	0.18 (285)	.430, -0.24
Mindful Parenting ²						
LFA	240/ 223	.83	3.29 (0.63)	3.39 (0.66)	-1.05 (238)	.297, -0.16
EAS		.67	3.10 (0.54)	3.09 (0.56)	0.02 (238)	.987, 0.01
EAC		.73	3.56 (0.65)	3.43 (0.79)	1.27 (238)	.206, 0.19
ENRP		.73	3.14 (0.57)	3.16 (0.61)	-0.18 (238)	.859, -0.03
NJAPF		.78	2.70 (0.68)	2.74 (0.62)	-0.38 (238)	.705, -0.06
CC		.81	3.95 (0.51)	3.94 (0.50)	0.14 (238)	.444, 0.02
Total		.88	3.32 (0.37)	3.33 (0.39)	-0.17 (238)	.867, -0.03

* $p < .05$; ¹ Reliability statistics reported as Cronbach's alphas, averaged across pre and post - Excellent ($> .9$), Good ($> .8$), Acceptable ($> .7$), Questionable ($> .6$), Poor ($> .5$), and Unacceptable ($< .5$); ² LFA = Listening with Full Attention; NJAPF = Non-Judgmental Acceptance of Parenting Function; EAC = Emotional Awareness of Child; EAS = Emotional Awareness of Self; CC = Compassion for Child; ENRP = Emotional Non-Reactivity in Parenting

Table 4

Results from Mixed ANOVA with Effect Sizes¹ (Time by Parent Role² by Variable Subscale³)

Outcome Variable	Time		Parent Role		Variable Subscale		Time x Parent Role		Time x Variable Subscale		Variable Subscale x Parent Role		Time x Var.Subscale x Parent Role	
	F(df)	<i>p</i> (η^2)	F(df)	<i>p</i> (η^2)	F(df)	<i>p</i> (η^2)	F(df)	<i>p</i> (η^2)	F(df)	<i>p</i> (η^2)	F(df)	<i>p</i> (η^2)	F(df)	<i>p</i> (η^2)
Child														
Behaviour														
Intensity	255.12 (1,210)	<.001*** (0.55)	0.98 (1,210)	.346 (0.00)	-	-	0.04 (1,210)	.843 (0.00)	-	-	-	-	-	-
Problem	211.21 (1,198)	<.001*** (0.52)	11.05 (1,198)	.001*** (0.05)	-	-	0.02 (1,198)	.896 (0.00)	-	-	-	-	-	-
Parent Wellbeing	25.45 (1,206)	<.001*** (0.11)	0.75 (1,206)	.388 (0.00)	300.34 (1.9,393.5)	<.001*** (0.59)	0.00 (1,206)	.999 (0.00)	7.63 (1.9,393.5)	<.001*** (0.04)	0.45 (1.9,393.5)	.639 (0.00)	0.71 (1.9,396.5)	.489 (0.00)
Parenting Approach	193.46 (1,211)	<.001*** (0.48)	5.40 (1,211)	.021* (0.03)	115.95 (1.9,406.8)	<.001*** (0.36)	1.24 (1,211)	.267 (0.01)	19.94 (2.0,420.3)	<.001*** (0.09)	1.13 (1.9,406.8)	.324 (0.01)	0.87 (2.0,420.3)	.615 (0.00)
Mindful Parenting	122.18 (1,180)	<.001*** (0.40)	1.08 (1,180)	.300 (0.01)	116.31 (4.1,732.1)	<.001*** (0.39)	0.40 (1,180)	.529 (0.00)	9.90 (4.5,808.1)	<.001*** (0.05)	6.37 (4.1,808.1)	<.001*** (0.03)	2.15 (4.5,808.1)	.064 (0.01)

p* < .05, *p* < .01, ****p* < .001; ¹ Partial eta squared effect size coefficients using the commonly accepted criteria of small ($\eta^2 = .01$), medium ($\eta^2 = .06$) and large ($\eta^2 = .14$); ² Parent role split between mothers (biological, step, foster, grand, *n* = 223) and fathers (biological, step, foster, grand, *n* = 115); ³ Subscales of outcome measure

Table 5Estimated Marginal Means (*M*), Standard Errors (*SE*) from Mixed ANOVA (Time by Parent Role¹ by Variable Subscale²)

Outcome Variable	Time		Parent Role		Variable Subscale <i>M</i> (<i>SE</i>)	Time x Parent Role			
	/x Variable Subscale		/x Variable Subscale			Mothers <i>M</i> (<i>SE</i>)		Fathers <i>M</i> (<i>SE</i>)	
	Pre <i>M</i> (<i>SE</i>)	Post <i>M</i> (<i>SE</i>)	Mothers <i>M</i> (<i>SE</i>)	Fathers <i>M</i> (<i>SE</i>)		Pre	Post	Pre	Post
Child Behaviour									
Intensity	150.83 (2.04)	121.94 (2.17)	138.17 (1.97)	134.49 (3.25)	136.28 (1.90)	152.44 (2.11)	123.91 (2.25)	149.21 (3.48)	119.97 (3.71)
Problem	17.55 (0.55)	9.76 (0.55)	15.25 (0.50)	12.07 (0.82)	13.66 (0.48)	19.18 (0.57)	11.32 (0.57)	15.93 (0.94)	8.20 (0.93)
Parent Wellbeing									
Depression	4.13 (0.26)	3.18 (0.25)	3.90 (0.24)	3.40 (0.39)	3.65 (0.23)	4.42 (0.27)	3.39 (0.26)	3.84 (0.43)	2.97 (0.42)
Anxiety	3.53 (0.30)	2.56 (0.28)	3.11 (0.28)	2.98 (0.44)	3.05 (0.26)	3.79 (0.32)	2.53 (0.30)	3.37 (0.51)	2.59 (0.48)
Stress	2.03 (0.23)	1.59 (0.24)	2.06 (0.23)	1.57 (0.37)	1.81 (0.22)	2.25 (0.25)	1.87 (0.25)	1.81 (0.40)	1.32 (0.40)
	6.83 (0.34)	5.38 (0.31)	6.54 (0.31)	5.66 (0.49)	6.10 (0.29)	7.32 (0.37)	5.77 (0.33)	6.34 (0.58)	4.98 (0.52)
Parenting Approach									
Over-react.	3.61 (0.05)	2.83 (0.05)	3.13 (0.04)	3.32 (0.07)	3.22 (0.04)	3.55 (0.05)	2.71 (0.06)	3.68 (0.08)	2.96 (0.09)
Laxness	3.75 (0.07)	2.91 (0.07)	3.24 (0.06)	3.42 (0.10)	3.33 (0.06)	3.68 (0.07)	2.80 (0.07)	3.82 (0.11)	3.02 (0.12)
Verbosity	2.96 (0.07)	2.42 (0.06)	2.64 (0.06)	2.74 (0.10)	2.69 (0.06)	2.94 (0.07)	2.34 (0.06)	2.99 (0.12)	2.50 (0.10)
	4.13 (0.06)	3.16 (0.07)	3.50 (0.05)	3.79 (0.09)	3.65 (0.05)	4.04 (0.06)	2.97 (0.07)	4.23 (0.10)	3.36 (0.11)
Mindful Parenting³									
LFA	3.28 (0.03)	3.63 (0.03)	3.49 (0.03)	3.43 (0.05)	3.46 (0.03)	3.30 (0.03)	3.67 (0.06)	3.26 (0.06)	3.59 (0.06)
	3.30 (0.05)	3.55 (0.04)	3.41 (0.04)	3.43 (0.07)	3.42 (0.04)	3.29 (0.06)	3.54 (0.05)	3.31 (0.09)	3.56 (0.07)

Outcome Variable	Time		Parent Role		Variable Subscale <i>M(SE)</i>	Time x Parent Role			
	/x Variable Subscale		/x Variable Subscale			/x Variable Subscale			
	Pre <i>M(SE)</i>	Post <i>M(SE)</i>	Mothers <i>M(SE)</i>	Fathers <i>M(SE)</i>		Mothers <i>M(SE)</i>		Fathers <i>M(SE)</i>	
					Pre	Post	Pre	Post	
NJAPF	2.77 (0.06)	3.15 (0.06)	2.87 (0.05)	3.05 (0.09)	2.96 (0.05)	2.62 (0.006)	3.11 (0.06)	2.91 (0.10)	3.19 (0.10)
EAC	3.53 (0.05)	3.75 (0.05)	3.74 (0.05)	3.54 (0.08)	3.64 (0.05)	3.60 (0.06)	3.89 (0.06)	3.47 (0.09)	3.61 (0.09)
CC	3.89 (0.04)	4.17 (0.04)	4.17 (0.04)	3.89 (0.06)	4.03 (0.04)	4.03 (0.04)	4.31 (0.04)	3.74 (0.07)	4.04 (0.06)
EAS	3.08 (0.05)	3.62 (0.04)	3.39 (0.04)	3.31 (0.06)	3.35 (0.04)	3.12 (0.05)	3.66 (0.05)	3.04 (0.08)	3.58 (0.07)
ENRP	3.13 (0.05)	3.53 (0.05)	3.33 (0.04)	3.33 (0.07)	3.33 (0.04)	3.15 (0.05)	3.51 (0.05)	3.10 (0.08)	3.55 (0.08)

¹ Parent role split between mothers (biological, step, foster, grand, *n* = 223) and fathers (biological, step, foster, grand, *n* = 115); ² Subscales of outcome measure; ³ LFA = Listening with Full Attention; NJAPF = Non-Judgmental Acceptance of Parenting Function; EAC = Emotional Awareness of Child; EAS = Emotional Awareness of Self; CC = Compassion for Child; ENRP = Emotional Non-Reactivity in Parenting

Table 6:

Proportion of Parents Rated as Improved, No Change and Deteriorated using Reliable Change Index, and Recovered using Clinical Significance

Outcome Variable	RCI¹ S_{diff}	Improved n (%)	No Change n (%)	Deteriorated n (%)	Recovered² n (%)	
Child Behaviour						
Intensity	212	11.12	125 (59.0)	86 (40.6)	1 (0.5)	90/165 (54.5)
Problem	200	3.45	113 (56.5)	86 (43.0)	1 (0.5)	86/137 (62.8)
Parent Wellbeing	208					
Depression	1.74	35 (16.8)	161 (77.4)	12 (5.8)	23/39 (59.0)	
Anxiety	1.73	20 (9.6)	180 (86.5)	8 (3.8)	13/25 (52.0)	
Stress	2.28	42 (20.2)	153 (73.6)	13 (6.3)	37/56 (66.1)	
Total	1.24	102 (49.0)	65 (31.3)	41 (19.7)	19/36 (52.8)	
Parent. Approach	213					
Over-reactivity	0.64	69 (32.4)	142 (66.7)	2 (0.9)	113/154 (73.4)	
Laxness	0.54	55 (25.8)	155 (72.8)	3 (1.4)	39/58 (67.2)	
Verbosity	0.74	65 (30.5)	146 (68.5)	2 (0.9)	96/193 (49.7)	
Total	0.34	118 (55.4)	93 (43.7)	2 (0.9)	107/158 (67.7)	
Mindful Parent.⁴	182					
LFA	0.37	41 (22.5)	133 (73.1)	8 (4.4)	-	
EAS	0.44	52 (29.1)	127 (69.8)	2 (1.1)	-	
EAC	0.42	29 (15.9)	147 (80.8)	6 (3.3)	-	
ENRP	0.42	23 (12.6)	158 (86.8)	1 (0.5)	-	
NJAPF	0.45	42 (23.1)	140 (76.9)	-	-	
CC	0.31	36 (19.8)	142 (78.0)	4 (2.2)	-	
Total	0.18	84 (46.2)	74 (51.6)	4 (2.2)	-	

¹ Cut-offs for reliable change calculated using pre-post/S_{diff} (Jacobson & Truax, 1991); ² Cut-offs to calculate normative return to wellness were ECBI Intensity > 131, ECBI Problem > 15, DASS Depression > 6, DASS Anxiety > 5, DASS Stress > 9, DASS Total > 23, PS Over-reactivity > 4, PS Laxness > 3.5, PS Verbosity > 3.1, PS Total > 3.2

Table 7

Results from Mixed ANOVA for Time by Attendance Status¹ by Variable Subscale² Including Effect Sizes³

Outcome Variable	Time		Attend Status		Variable Subscale		Time x Attend Status		Time x Variable Subscale		Variable Subscale x Attend Status		Time x Var.Subscale x Attend Status	
	F(df)	p (η ²)	F(df)	p (η ²)	F(df)	p (η ²)	F(df)	p (η ²)	F(df)	p (η ²)	F(df)	p (η ²)	F(df)	p (η ²)
Child														
Behaviour														
Intensity	313.44 (1,210)	<.001*** (0.60)	0.67 (1,210)	.795 (0.00)	-	-	0.56 (1,210)	.46 (0.00)	-	-	-	-	-	-
Problem	266.03 (1,198)	<.001*** (0.57)	1.01 (1,198)	.295 (0.01)	-	-	0.01 (1,198)	.912 (0.00)	-	-	-	-	-	-
Parent Wellbeing	32.84 (1,206)	<.001*** (0.14)	1.02 (1,206)	.801 (0.01)	360.38 (1.9,393.5)	<.001*** (0.64)	1.50 (1,206)	.223 (0.01)	6.16 (1.9,396.1)	<.002** (0.03)	0.31 (1.9,393.4)	.723 (0.00)	0.39 (1.9,396.5)	.680 (0.00)
Parenting Approach	252.79 (1,211)	<.001*** (0.55)	1.42 (1,211)	.235 (0.01)	127.56 (1.9,407.9)	<.001*** (0.38)	0.00 (1,211)	.993 (0.00)	25.46 (2.0,420.2)	<.001*** (0.11)	1.06 (1.9,407.9)	.347 (0.01)	0.79 (2.0,420.2)	.455 (0.00)
Mindful Parenting	163.63 (1,180)	<.001*** (0.48)	0.84 (1,180)	.361 (0.01)	172.01 (4.0,719.3)	<.001*** (0.49)	1.05 (1,180)	.306 (0.01)	11.45 (4.5,809.0)	<.001*** (0.06)	1.16 (4.0,719.3)	<.329 (0.01)	0.50 (4.5,809.0)	.760 (0.00)

*p < .05, **p < .01, ***p < .001; ¹Attendance Status split between parents who attend as parent-team versus attended individually; ²Subscales of outcome measure; ³Partial eta squared effect size coefficients using the commonly accepted criteria of small (η² = .01), medium (η² = .06) and large (η² = .14)

Figure 1

Study Participants Attending Enhanced Behavioural Parenting Groups

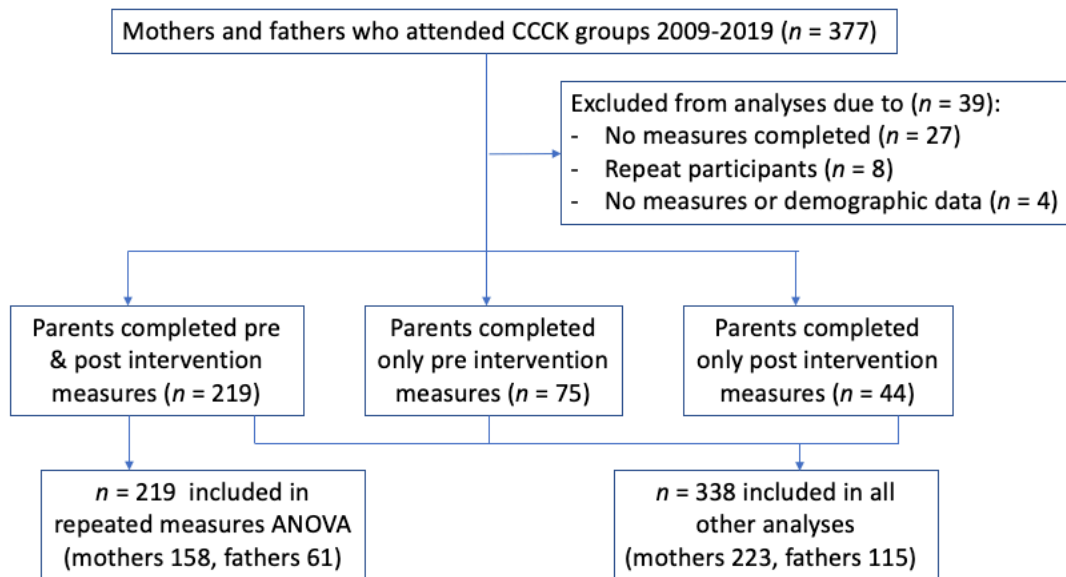


Figure 2

Pre- and Post-Intervention Mean Ratings for Mothers and Fathers across Outcome Measures

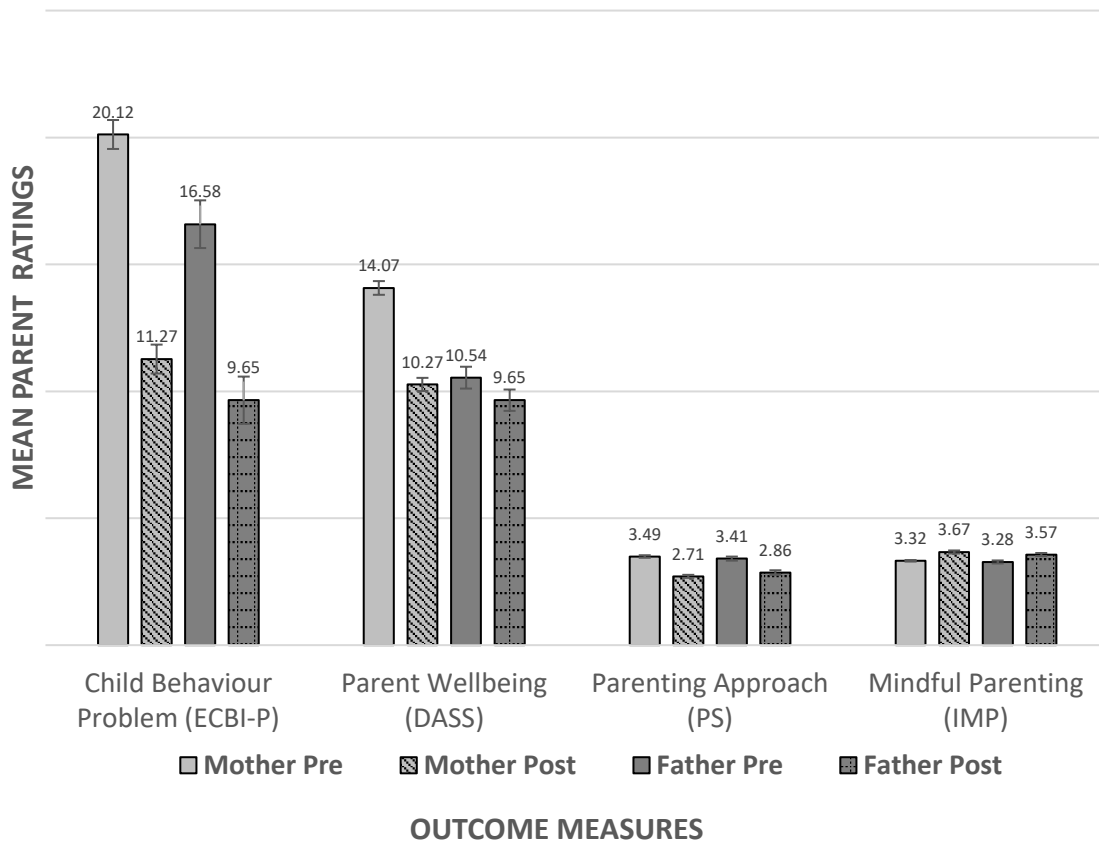


Figure 3

Pre- and Post-Intervention Mean Ratings for Mothers and Fathers for ECBI-Intensity

