Mindfulness-based wellbeing for socio-economically disadvantaged parents: a pre-post pilot study

Running head: MINDFULNESS-BASED WELLBEING FOR DISADVANTAGED PARENTS

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ABSTRACT

Purpose: Behavioural parent training (PT) interventions partially mediate risk factors for the development of child behavioural problems. Mindfulness skills could have benefit in alleviating the impact of these risk factors for parents who are socio-economically disadvantaged.

Design: A pre-post single group comparison of disadvantaged mothers attending the Mindfulness-Based Wellbeing for Parents (MBW-P) programme.

Findings: Changes were observed in facets of parental stress (Parenting Stress Index-Short Form; Abidin, 1995), depression (Beck Depression Inventory-II; Beck, Steer & Brown, 1996), and brooding (Ruminative Responses Scale; Nolen-Hoeksema & Morrow, 1991), with moderate to large effect sizes and incidences of clinical change.

Research limitations: The research design, although pragmatic includes a small sample and no control or long term comparison group.

Social implications: Mothers considered as the ‘hardest to reach’ group in terms of vulnerability, risk factors, and likely to gain from intervention demonstrated positive shifts post-intervention. A targeted mindfulness-based intervention, delivered pragmatically within a health service context may have benefit in reducing the impact of risk factors on parental wellbeing.

Originality: To our knowledge, this is the first evaluation of a targeted mindfulness group delivered within routine health care settings, in identified ‘high risk’ areas, by trained routine staff.

Keywords: parenting, mindfulness, child behaviour, parental stress, wellbeing, early intervention, depression
INTRODUCTION

Parent training (PT) programmes, whilst identified as the most successful interventions for conduct problems both in clinical and preventative settings (Beauchaine, Webster-Stratton & Reid, 2005; Brestan & Eyberg, 1998; Kazdin, 1997; Hutchings et al., 2007), are not effective for all families. Meta-analyses conducted by Lundahl, Risser and Lovejoy (2006) and Reyno and McGrath (2006) both conclude that children of disadvantaged parents, including children of single parents, of low income, and children of parents experiencing depression demonstrate poorer PT intervention outcomes as compared to those children whose parents face lower levels of adversity. Moreover, children are at greater risk of developing disruptive behaviour patterns when living in a socio-economic disadvantaged circumstances (Attride-Stirling et al., 2000; Bloomquist & Schell, 2002; Webster-Stratton & Herbert, 1994), with prevalence for child conduct problems rising to an estimated 20% for children living in disadvantaged areas, and 37% for ‘looked after children’ within foster care, in the UK (Attride-Stirling et al., 2000; Tapsfield & Collier, 2005). Children and parents living in these circumstances are therefore considered both at highest risk, and as least likely to gain benefit from PT interventions.

One possible explanation for this relation between parenting practices, socio-economic disadvantage, and child maladjustment may be the Family Stress Model of economic hardship (Conger et al., 1992). Specifically, the Family Stress Model proposes that economic hardship or economic disparity leads to economic pressure. The model
predicts that when economic pressure is high, parents are at an increased risk for emotional distress. This in turn is hypothesized to lead to disrupted family relationships, which leads to an increase in harsh or inconsistent parenting. These harsh parenting practices result in increases in child internalizing and externalizing problem behaviours. Parenting practices have consistently accounted for the variance in child behaviour change following PT intervention, and change in parenting skill may be the most significant ingredient in effective PT programmes and play a causal role in child behaviour change, however few PT interventions report positive outcome effects when delivered to parents of children considered ‘at risk’ of developing conduct disorder in pragmatic clinical settings (Gardner et al., 2010).

While PT programmes are grounded in theories of parent child interaction, drawing from Patterson’s coercive family process theory (Patterson, & Forgatch, 1995) and Bandura’s social learning theory (Bandura, 1986), Leinonen, Solantaus and Punamäki (2002) suggest that parenting is dependent on parental/family resources and circumstances, and Pinderhughes and colleagues (2000) suggest socio-economic disadvantage as related to increased cognitive-emotional reactivity, advocating supporting parents in monitoring cognitions and affect.

Mindfulness-based interventions encourage a present-centered non-judgmental awareness and an attitude of approach rather than avoidance of experience, and mindfulness techniques have been integrated in several parenting interventions (for example, Bögels, Lehtonen & Restifo, 2010; Van der Oord, Bögels & Peijnenburg, 2012). One such example is the Strengthening Families Program with mindfulness
techniques (Coatsworth et al., 2010). Here the authors suggest that integrating mindfulness training into the intervention aided parents’ moderated emotional reactivity to their child’s behavior. Similarly, Bluth and Wahler (2011) consider reactive responses as lessened by parents becoming more aware of their habitual patterns of responding through mindfulness training.

Harnett & Dawe (2012) describe how mindfulness-based interventions may sit within and complement existing parenting and family intervention strategies. Core to this integration is considering parents’ capacity to be emotionally available; that implementation of parenting practices is directly influenced by parents’ emotion regulation capacity. The integrated framework suggested by Harnett and Dawe (2012) highlights the ecological context as an important facet in supporting parents and families. For example, they suggest that high levels of emotional dysregulation amongst parents result in a high stress environment, and this impairs capacity to be emotionally available. However, helping parents to manage aspects that are amenable to change, such as managing life stressors, could mediate this relationship. It is within this context they suggest mindfulness as a potentially useful therapeutic approach to address this self-regulatory capacity.

There is growing literature on automaticity and its role in the development and maintenance of adaptive and maladaptive behaviour (Dumas, 2005; Duncan, Coatsworth & Greenberg, 2009). Consistent with this, the PT literature indicates that ineffective parenting is characterized by habitual patterns of automatized responding which are generally resistant to change. Mindfulness-based training can offer a method of lessening
the grip of automaticity and help parents to become aware of their parenting behaviour, and thus more empowered to create change (Dumas, 2005). Models of mindful parenting highlight the ability to disengage from unexpected and charged stimuli (Bögels, Lehtonen & Restifo; 2010). Bögels and colleagues (2010) propose that mindful parenting interventions may be effective by reducing parental stress and parental preoccupation of psychopathology, improving parental executive functioning and reducing the impact of dysfunctional upbringing schemas and habits. Similarly, Duncan, Coatsworth and Greenberg (2009) suggest mindful parenting as enhancing the capacity to listen, adopting a non-judgemental acceptance and greater emotional awareness of self and child, with parents being better able to self regulate in the parenting relationship by avoiding short term automated reactive responses, and maintaining a focus on the long term parental goals with compassion for both the self and the child.

Mindful parenting has been described as a fundamental parenting skill or practice (Kabat-Zinn & Kabat-Zinn, 1997) and that fostering mindfulness in the everyday context of parenting and parent training could improve the effectiveness of parenting interventions (Dumas, 2005). Mindful parenting interventions are increasingly being used to improve parenting skills and the parent-child relationship (Duncan et al., 2009); to help prevent and treat mental disorders in parents and children (Bögels et al., 2010; Dumas, 2005), and to decrease aggression and improve compliance and social behaviour in children with developmental disabilities and attention deficit hyperactivity disorder (Ferrailoli & Harris, 2013; Neece, 2012; Singh et al., 2006; Singh et al., 2010). Moreover, emerging evidence in exploring trait mindfulness amongst parents of children with
developmental difficulties suggest that mindfulness mediates the impact of child behavior problems on maternal negative outcomes (Connor & White, 2014; Jones et al., 2014). The Mindfulness-Based Wellbeing for Parents (MBW-P) programme evaluated in this current pilot study aims to enhance parental wellbeing through the cultivation of mindfulness skills, for socio-economically disadvantaged parents. The intervention aims to offer a universally accessible, community-based approach for parents living in recognized areas of ‘risk’, to alleviate stress related to parenting and enhance wellbeing. It is hypothesized that those parents, traditionally considered ‘hard-to-reach’, who have access to PT interventions, may benefit from developing mindfulness skills to respond differently to risk factors and stressors that are present, thereby reducing the impact of risk factors on parental wellbeing.

**Rationale for study.**

The MBW-P programme is at an early stage of development and implementation. Given the emerging efficacy of mindfulness techniques in PT programmes, the evaluation here therefore aims to assess whether socio-economically disadvantaged mothers demonstrate pre-post intervention change in terms of parental wellbeing and parenting-related stress as a result of attending the MBW-P programme.
METHODS

Participants

Twenty-three mothers taking part in the MBW-P programme delivered within a rural setting in North Wales, UK between October 2009 and September 2011 were invited to take part in the study. Not all participants completed baseline demographic data. Mothers were aged between 19 and 50 years \((M = 31.73, \, SD = 8.16, \, N=22)\), with a mean age of 24.91 years when having their first child \((range \, 16-37 \, years, \, SD=5.94, \, N = 23)\). They had an average of two children \((range \, 1-4)\), and identified one child as the ‘index’ child, with which they felt they needed the most support. Index child age ranged from one to 72 months \((M=37.78, \, SD=24.31, \, N=22)\), of which eleven were boys and nine girls \((N=20)\). Participants were mostly unemployed or claiming some form of income support \((N=13)\), or in part-time employment \((N=7)\), with the majority acting as the primary carer not accessing regular child care \((N=14)\). Of the 20 participants who did provide data regarding previous interventions received, 14 had previously undertaken the Incredible Years Parent Training programme \((Webster-Stratton, \, 1989)\), a well disseminated, evidence-based PT programme, and none had previously engaged in a mindfulness-based intervention. Only parents who completed pre-and post-intervention data collection are included in the analyses \(as \, not \, all \, measures \, were \, completed \, consistently, \, a \, final \, minimum \, N = 9, \, and \, a \, maximum \, N=13)\). There were no significant differences in any pre-intervention variables between those participants who did, and did not, complete all measures. All parents included in the analysis attended at least 4 or
more sessions (considered a ‘minimum’ required dose for mindfulness-based interventions).

Measures

**Parent report of mental health: depression, rumination, and stress.**

*The Parenting Stress Index [Short Form] (PSI/SF; Abidin, 1995).*

This PSI/SF is a 36-item inventory measuring the stress experienced in relation to their parenting role. The PSI/SF contains three test subscales: Parental Distress (PD), Parent-Child Dysfunctional Interaction (P-CDI), and Difficult Child (DC). Abidin (1995) reports good test-retest reliability for each subscale (ranging from .68) and internal reliability coefficients from .80. Total scale \( \alpha = .96 \) in the current sample, with Cronbach’s alpha of .94 for both P-CDI and DC, and .91 for PD subscales. Clinical threshold caseness is derived by calculating percentiles from raw scores. Those that fall within the 85th percentile demonstrate mild concern, with those falling within the 90th percentile or above indicate clinically significant distress. Abidin (1995) reports normative data from a sample of 800 mothers, with target children of 10 – 84 months in age (mean age = 43 months). Mean scores obtained for the PSI/SF were 25 for PD, 19 for P-CDI, 25 for DC, and 69 for Total Stress.

*Ruminative Response Scale (RRS; Nolen-Hoeksema & Morrow, 1991).*

The RRS is a 22-item measure of depressive rumination comprising three factors; a factor overlapping considerably with depressive symptoms, a brooding factor and a reflection
factor (Roberts, Gilboa, & Gotlib, 1998; Treynor, Gonzalez, & Nolen-Hoeksema, 2003). The brooding scale has high face and content validity and is closest to the construct hypothesized to be involved in depressive relapse. Cronbach’s $\alpha = .92$ for the total scale in the current sample, with the depression related, brooding and reflection factors yielding .94, .81, and .84 respectively. Data from 1,328 randomly selected community sample participants indicated mean responses of 9.83 for the reflection scale, and 9.40 for the brooding scale. Within this sample, females reported mean scores of 10.00 and 9.66 for the reflection and brooding subscales, respectively (Treynor, Gonzalez & Nolen-Hoeksema, 2003). The scale does not include data on clinical cut-off criteria, although guidance is given in percentile cut-offs within the observed sample as the highest and lowest 33% of the sample as an indicator of high and low ruminators, respectively. Normative data for females only are reported in light of the current sample.

*The Beck Depression Inventory II (BDI; Beck, Steer & Brown, 1996).*

The BDI-II is a 21-item inventory measuring the severity of characteristic attitudes and symptoms associated with depression. The BDI-II coefficient alpha = .92, demonstrating high internal consistency, with Cronbach’s $\alpha = .93$ in the current sample. Clinical caseness thresholds are derived from raw scores, with normal ranging from 5-9; mild to moderate depression 10-18; 19-29 moderate to severe depression, and 30-63 indicating severe depression.

*Parent sense of Mindfulness and Wellbeing.*

*The Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer & Toney, 2006).*
The FFMQ is a self-report questionnaire used to assess five different facets of mindful awareness; specifically, non-reactivity to inner experience, observing, acting-with-awareness, describing and non-judging of experience. The Cronbach’s $\alpha$ coefficients for the different subscales have been reported to be adequate-to-good (Baer et al., 2006; Baer et al., 2008), with total $\alpha = .86$ in the current sample (factor Cronbach’s alpha within the current sample are: Observing = .72, Describing = . 82, Acting with awareness = .72, Non-judgement = .91 and Non-reactivity = .77). Non-meditating community sample mean data range from 19-25 for each subscale of the FFMQ (Baer et al., 2008).

*Warwick-Edinburgh Mental Well-being Scale (WEMWBS; Tennant, Hiller, Platt, Joseph, Weish, Parkinson, Secker & Stewart-Brown, 2007).*

The WEMWBS is a 14-item positively worded scale, covering most aspects of mental health currently in the literature, including positive affect, satisfying interpersonal relationships and positive functioning. Tennant et al. (2007) report good content validity, with total median scores across all participants = 51 (95% CI 51-52), with the lowest median score observed for those with very poor self perceived health status (median = 41, 95% CI = 36-47), and those scoring highest amongst those with very good self perceived health status and high income (median = 54 and 55, respectively). The current sample yielded Cronbach’s $\alpha = .94$.

**Design and Ethics**

The study adopts a single group pre-post measures design. Participant where complete pre-post data is available are reported only (N= 13 max). Ethical and
governance approval for the research was received by Betsi Cadwaladr University Health Board Research Ethics Committee (formerly North West Wales Research Ethics Committee).

**Intervention service setting.**

The study explored the MBW-P programme delivered in a rural identified Flying Start area. Flying Start areas are Welsh Government funded initiatives to deliver prescriptive, intense programmes for the most disadvantaged communities, with an aim to improve children’s outcomes both in readiness for school and longer term skills (DfTE, 2005; Welsh Assembly Government [WAG], 2005).

**Intervention**

An 8-week MBW-P programme delivered in weekly sessions of 2 hours duration, adapted from the MBSR model (Blacker et al., 2009; Kabat-Zinn 1990) and tailored specifically towards multiply stressed parents was developed, integrated, and delivered within a UK National Health Service (NHS) setting. The programme aimed to emphasize parent well-being, rather than a reduction of stress. Specifically, the intervention included the following adaptations:

*Shorter practices:* Practices delivered during sessions were between 10 and 30 minutes.

This varies from the MBSR model, where practices can last approx. 45 minutes.

*Home practice:* Practices to be done at home were reduced to 10 – 15 minutes, and participants were encouraged to repeat 10 minute practices twice during each day, and to practice every day. Home practice particularly emphasized “informal practice”.

Although for this client group it was difficult to find time to do formal practice,
integrating mindfulness into their everyday lives was an important aim of the course, for example, bringing mindfulness to everyday activities with their children.

*Parental values:* Participants were encouraged to reflect on parental ‘values’ - for example what values were they aware had been passed to them from their parents and what values were they aware of passing on to their children.

*Communication skills:* Mindful listening and communication was emphasized throughout the course.

*Social Interaction:* Social interaction was encouraged, particularly at the beginning of each session, and during a break. This was seen to be important additional support for this client group.

*Written materials:* Written handouts were reduced to 1 to 1.5 sides of A4. Handouts also included illustrations and metaphors, designed to help participants remember key concepts. Handouts were given to participants at the end of each session.

*Theoretical material:* In addition to the psychological theory normally offered within MBSR, the course included an appropriate short didactic session on attachment (Bowlby, 2008) and also on the three affect system model (Gilbert, 2010).

**Procedure**

Parents were invited to attend the MBW-P programme through posters in the local community centre and recommendation by regional social and/or health workers. No inclusion criteria were applied, other than living within the intervention service setting catchment area. All parent who took part in the intervention were invited to take part in
the study. Upon written informed consent, all participants completed baseline measures (T0) before starting the programme, and again upon completion of the course (T1). Where possible, data collection was completed face-to-face, although options to complete measures and return via post were given.

**Data analysis/preparation.**

Missing data was dealt with in line with specific measures guidelines, where mean replacement was allowed where one item was missing. Where more than 10% of items were missing, the measure was not included in the analysis. All data was normally distributed and analyzed using non-parametric tests. Comparison of T0 to T1 changes were analyzed using paired t-tests. Clinical threshold indicators of caseness is assessed in line with measure guidelines for clinical significance. Attrition from the study was high, with 11 participants lost to follow-up data collection (48%). Per protocol data only is presented, where complete data was available for both pre- and post- intervention time points. To allow for multiple testing, bonferroni corrections is applied, with an adjusted $p=.004$. Cohen’s $d$ effect sizes were calculated to assess statistical effect sizes. Due to positive sample size estimates, Hedges’ correction is applied and effect sizes are reported as Hedges $g$. Reliable Change Index (RCI) and Clinical Significance is assessed in line with Jacobson and Truax’s (1991) method: those recovered (classed as passing both the RCI and clinical cut-off), and improved (passing the RCI and/or the cut-off) are reported. Mid-range clinical cut-off calculations are made using normative means.

**RESULTS**
Mean, standard deviation, paired t-test comparisons, and Hedges’ $g$ effect size are reported in Table 1. For illustration purposes, normative data from the existing literature are also reported in Table 1. T0 data indicate that parents reported higher levels of stress, depression, and rumination than community samples’ normative data observed in the wider literature, as well as less total wellbeing and facets of mindfulness. Given the unequal sample sizes, it was not deemed appropriate to draw inferential comparisons between these groups but are provided as an illustrator of the group characteristics at baseline in the absence of a control group. Mid-point clinical cutoffs are suggested and RCI calculated and reported in Table 1. Percentage considered as recovered and/or improved in terms of clinical change are reported in Table 1.

[SEE TABLE 1]

Stress related to parenting was assessed by the PSI/SF. Total stress, or its subscales of Parental Distress (PD), Parent-Child Dysfunctional Interaction (P-CDI), and Difficult Child (DC) was not observed to change statistically significantly from T0 to T1 ($p<.004$). Overall total PSI/SF change yielded a large effect size ($g = .81$), with the PD and DC subscales observing moderate to large effect sizes ($g = .53$ and .70, respectively). Overall indicator of clinical caseness illustrates an observable shift post-intervention with more participants falling below the clinically significant percentile of concern, and a reduction in the clinically significant range. Of note, pre-intervention, 77% of the sample fell within the clinical range of concern, to include mild, significant, and severe clinical
concern range in line with identified cut-offs as indicated by the PSI/SF manual. Post-intervention, this percentage was reduced to 33%, with the majority of participants falling within the normal/below clinical concern range. Whilst none of the PSI/SF subscales or total score indicated change to suggest ‘recovered’ clinical shift, clinical change was observed to indicate participants had improved: that is, post-intervention means were more in line within the normal range of the mid-point cutoff.

Depression and associated symptomology was assessed by both the BDI and the RRS, respectively. Paired t-test revealed non-significant change in BDI scores from T0 to T1 although moderate to large effect size was observed (g = .69). Large to very large effect sizes were observed for all three RRS subscales (Depression related $g = .93$; Brooding $g = 1.06$, and Rumination $g = .80$). As with the PSI/SF, no participants were considered as recovered post-intervention, however a significant amount of improvement was observed (41.67% for both the brooding and reflection subscales).

While T0 to T1 overall change score was non-significant for the BDI ($t_{[12]} = 1.95, p = .07, g = .69$), there was a demonstrated shift between caseness categories of the BDI, with more participants falling within the normal range post-intervention (67%) compared to baseline (8%, with 92% falling within clinical concern to include mild, moderate to severe, and severe range). In calculating clinical significant change, 46.15% of participants fall within the ‘recovered’ range, and an additional 11.54% considered ‘improved’.

Moderate effect sizes are reported in support of shifts in facets of mindfulness (see Table 1). Small to moderate effect sizes are observed, with the exception of the
observing and non-reactivity to inner experience, where very large effect sizes are reported. All subscales demonstrated improvements in terms of clinically significant change, with facets of observing, acting with awareness, describing, and non-reactivity indicating improvements to the ‘recovered’ range of clinical significance.

Changes in wellbeing, as measured by the WEMWBS, were non-significant, although overall mean wellbeing is higher at T1 as compared to T0, and moderate effect sizes are reported (see Table 1). Moreover, clinical change indicated 34.61% of participants as recovered post-intervention, with a further 30.80% improved.
DISCUSSION

In acknowledging the small sample size, lack of control group, and follow-up, these preliminary results remain promising. Both moderate to large effect sizes and clinically significant changes are observed in facets known to be significantly associated with depression and parental stress, providing some evidence to suggest there are benefits for implementing a mindfulness-based intervention for parents in a typically ‘hard to reach’ population. Baseline self-reported characteristics of rumination, depression, and parenting stress were higher than those observed in other community samples in the wider literature, as well as less self-reported wellbeing. It is suggested that participants were particularly vulnerable, and met the criteria specified in targeting those hardest to reach, at highest risk, and potentially least likely to benefit from PT.

Specifically, clinical conclusions are drawn in relation to facets of mothers’ stress and depression. The PSI/SF has three subscales: the PD subscale indicates the distress a parent is experiencing in their parental role as a function of personal factors directly related to parenting, while the P-CDI subscale focuses on the parent’s perception that their child does not meet their expectations. The DC subscale, however, assesses the presence of basic behavioural characteristics that could make children either easy or difficult to manage. These include the parents’ view of the child’s temperament, defiance, non-compliance, and demandingness. The MBW-P programme is not intended to change the behavior of the child as do PT interventions, and therefore this is an interesting finding. Whilst not empirically tested, theoretically, this change could in some way be related to the intervention itself and changes in facets of mindfulness, namely observing
and non-reactivity. It is unlikely that the presence or frequency of child demanding or non-compliant behaviour has decreased as a result of intervention, rather it is suggested that it is the parent’s view of these behaviours being present that has shifted. Moreover, non-reactivity, considered a core component of mindfulness skills, refers to the skill of not reacting to stressors as they occur. It is suggested that MBW-P supports parents in shifting the way they respond to stressors as they occur, rather than attempting to change the stressor itself. These findings support those suggested by Jones and colleagues (2014), who consider the potential mechanisms through which mindfulness mediates child behavior problems as parents being less judgemental of experiences and less reactive, and more aware of internal processes. Given that the parents who participated in this study are living in an identified area of high risk, and therefore the presence of stressors themselves is unlikely to change, it is suggested there is some efficacy for MBW-P in supporting parents to deal with these stressors in a useful way, which may impact positively on their wellbeing. The finding that wellbeing shifted into a recovered clinical range is encouraging, and adds some support to this hypothesis. Whilst the findings here are tentative support for existing models of mindful parenting, it does highlight the potential benefit of mindfulness training for parents in a disadvantaged setting.

Shifts in depression scores, whilst not significant, were demonstrated in terms of clinical caseness of the BDI, and the depression related and brooding subscales of the RRS. Similar to the discussion regarding PT interventions and changing child behaviour, the aim of the MBW-P is not to reduce depression scores – the intervention itself is not a
targeted intervention for depression, nor does it employ cognitive behavioural techniques such as the closely related Mindfulness-Based Cognitive Therapy (MBCT; Segal et al., 2002), recommended as an intervention for recurrent depression. However, it is suggested that reductions in depression related symptomology is observed as a result of developing mindfulness skills, and lends strength in the potential of the intervention to improve parental wellbeing.

This study was conducted within a UK NHS context, in a Welsh Government Flying Start area, which is a national government initiative, aimed at delivering early intervention to families considered the most disadvantaged and ‘hardest to reach’. It is worth noting that parents met criteria as those ‘hardest to reach’ not only by the geographical and economical status, but also by their baseline scores in comparison to normative data for measures. For example, the majority of parents fell well within the percentile for clinical or severe clinical concern at baseline. In addition to this, baseline scores were substantially higher than normative data reported by Abidin (1995). For the total stress, normative data suggest a score of 69 – the current sample mean at T0 was 98.89, and whilst at T1 the sample mean was still above the normative range, scores had fallen within the 95% percentile or below, to 76.22. The scores reported at T0 are similar to those reported in other ‘high risk’ parent training trials; for example, Hutchings and colleagues (2007) evaluation of parent training delivered in Sure Start areas reported mean PSI total score as 100.7 ($SD = 23.8$), reducing to 84.0 ($SD = 22.6$) at follow-up.

The encouraging findings reported here seem to demonstrate that, whilst ‘at risk’ in terms of family demographic level risk, a mindfulness-based intervention can have
promising outcomes despite these risk factors being prominent. This has significant clinical implications given that poorer outcomes are anticipated for those families who are at greatest risk of family demographic and parent psychological resource level risk, and recommendations for effective preventative intervention include paying particular attention to the risk factors for the population (Bywater, 2012).

In line with the hypothesis that ineffective parenting can become an automatized pattern of habitual responding (Dumas, 2005), mindfulness-based interventions targeted for parents seem to lessen the grip of automaticity. It is proposed that a mindfulness-based intervention for parents has added benefits to PT programmes, which focus primarily on dealing with parent and child behaviours and interactions from a social learning perspective. By offering a mindfulness-based intervention, there seems to be benefit in targeting the underpinning issues of stress, namely by training in non-reactivity. By becoming less reactive to events as they occur, parents seem to rate less presence of basic behavioural characteristics that can lead to perceiving their child as difficult. It is the shifts in the parental level risk factors observed here that seem to hold the most promise to parents who are typically hard to engage with, or do not benefit from, PT interventions. Although these considerations require further testing before any generalizability can be inferred from the findings presented here, there is evidence to suggest that parents of children with developmental difficulties who experience greater parenting related stress benefit as a result of mindfulness-based training (Connor & White, 2014).
Despite some promising findings, the study is not without its limitations. Whilst attempting to conduct a pragmatic evaluation, this led to a small sample size, without a control group or longer-term follow-up. As a result, the results reported here must be interpreted with caution. Of note, it is recognized that, without a control-group comparison, it is difficult to conclude that observed shifts are due to intervention effects alone. However, consideration is given that parents were reporting levels of stress and depression within a clinical concern pre-intervention, and that whilst child maturity may in some way explain shifts in presence of difficult child behaviours, we propose that clinically significant shifts would not be observed due to time alone over a 2-month period. Moreover, shifts in facets of mindfulness is proposed as a result of the intervention, as it is hypothesized these shifts would not be observable without specific mindfulness training. Further investigation would warrant addressing these limitations.

Whilst the study was conducted as an opportunistic sample as opposed to a randomized controlled trial, the intervention was delivered by local NHS staff, embedded within the service setting, with external investigators exploring the benefits of the intervention. Conducting the evaluation as an open study limits the conclusions that can be drawn. Namely, attrition from the study was high and reasons for not completing data collection were not gathered by the researchers. Researchers attended the service setting to collect data, although attendance by participants was low, and postal options were given. Typically, the return rate for postal data collection is often reported as low in the wider literature, with some evidence to suggest that a lower response rate is observed amongst women, who are older and are not working (Lall et al., 2012). Options for
telephone interviews and home visits would potentially improve data completion rates. Gathering reasons for not completing data collection would also aid future investigations, where flexible data collection methods are integrated into the research design. Consultation with service users and carers at an early stage of research design would also help strengthen the research design to optimize data collection.

All participants attended at least 4-sessions of the intervention, although total attendance was not reported, and reasons for not attending was not ascertained. Future research in exploring the acceptability of the intervention in terms of attendance and engagement would require monitoring reasons for completion and non-completion across all aspects of the study, to include attendance and engagement at intervention sessions, homework, and data collection.

Additionally, only mothers took part in the study, as expected given the intervention setting. All mothers were the primary carer, and consideration should be given in future studies in engaging both mothers and fathers in such interventions. Specific consideration about the potential different mediators in parental distress should be given here; for example, Jones and colleagues (2014) found mindfulness as mediating maternal depression, anxiety and depression, and paternal depression for parents of children with autistic spectrum disorders. It may be that the different roles of parenting, especially in single parent, or separated, families, have differing impacts on parental distress in disadvantaged circumstances.

Despite the study limitations, it is proposed that mindfulness training may be an appropriate approach for parents where risk factors for both parental and child mental
health is established, and increased prevalence for poor behavioural outcomes without intervention is recognized. Whilst the conclusions drawn here are tentative given the pre-post pilot study design, the findings are in line with recent explorations of a mindfulness-based approach to PT as potentially efficacious for parents who experience greater stress within their parenting role (Ferraioli & Harris, 2013). As Harnett and Dawe (2012) highlight, it is not suggested that such interventions are to replace those established PT programmes that have demonstrated efficacy. Rather, offering a mindfulness-based intervention, or integrating mindfulness-based techniques into existing PT programmes, as an early intervention for parents can complement and prepare parents for PT intervention. It is suggested that mindfulness training can aid cognitive reactivity and emotional availability by reducing the impact of parental demographic and psychological resource level risk factors, which can positively impact on the efficacy of PT interventions.
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Table 1: Mean, standard deviation, statistical and clinical change.

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<th>Normative data</th>
<th>Clinical cut-off (JT method)</th>
<th>T0 M (SD)</th>
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<th>% Recovered</th>
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<td>27.22</td>
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<td>22.17 (8.38)</td>
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<td>.19</td>
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<td>15.27</td>
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<td>.69</td>
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<td>WEMWB (N=13)</td>
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*N.B. Bonferroni corrections p = .004; * Normal range as suggested by the BDI manual; NR= normative data not reported in manuals, PSI (SF) = Parenting Stress Index (Short Form; Abidin, 1995), PD = Parental Distress, PCDI = Parent-Child Dysfunctional Interaction, DC = Difficult Child; BDI-II = Beck Depression Inventory II (Beck, Steer & Brown, 1996); WEMWB = Warwick-Edinburgh Mental Well-being Scale (Tennant, Hiller, Platt, Joseph, Weish, Parkinson, Secker & Stewart-Brown, 2007); RRS = Ruminative Response Scale (Nolen-Hoeksema & Morrow,
1991; DR = Depression Related scale; FFMQ = The Five Facet Mindfulness Questionnaire (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006). NonJudge = non-judging of experience, Observe = observing, Describe = describing, NonReact = non-reactivity to inner experience, and Aware = acting-with-awareness.