The wellbeing value of reducing parental conflict

In association with Dr Allan Little

March 2022

PRO BONO ECONOMICS

Pro Bono Economics uses economics to empower the social sector and to increase wellbeing across the UK. We combine project work for individual charities and social enterprises with policy research that can drive systemic change. Working with 400 volunteer economists, we have supported over 500 charities since our inception in 2009.

Tavistock Relationships has been building an international reputation as a leading training and research centre in therapeutic and psycho-educational approaches to supporting couples since 1948. We train the next generation of couple therapists and provide clinical services to couples and parents, face to face (in London) and online, delivering a range of affordable services to help people with relationship difficulties, sexual problems and parenting challenges.

Dr Allan Little undertook this analysis in a personal capacity, as a consultant to Tavistock Relationships.

Summary

A relationship with a partner has been shown to be an important driver of wellbeing for adults in the UK. However, when relationships lead to conflict it can have serious consequences for the health and wellbeing of parents and children alike. Adults who are dissatisfied with their relationship are nearly three times more likely to experience a major episode of depression and nearly four times as likely to misuse alcohol. Children exposed to destructive conflict are more likely to experience depression or anxiety, have physical health problems, develop behavioural problems and do worse at school.

Tavistock's Mentalization Based Therapy (MBT) for Parenting under Pressure exists to support the 12% of families that report relationship distress. It helps couples develop practical skills to support communication and problem solving, with the aim of reducing conflict and improving outcomes for the whole family.

We review evidence from the MBT programme in Hertfordshire to estimate the potential economic benefits generated from the programme. Our approach to valuing the wellbeing of participants is consistent with new guidance from HM Treasury.

Our analysis suggests that:

- The wellbeing improvement for parents that moved beneath the threshold for a clinically diagnosable state of mental illness over the course of the treatment is likely to be valued at between £15,900 and £25,400 per person for each year these effects last.
- We estimate that between 51 and 130 participants in the MBT programme in Hertfordshire moved beneath the threshold for a clinically diagnosable state of mental illness between 2019 and 2021, suggesting total wellbeing improvements for participants of between £0.8m and £3.3m for each year that these improvements are sustained.
- If mental health improvements are sustained for just one year, then it is possible that the economic benefits of the programme will outweigh the costs.
- If the benefits persist for 10 years, then less than 20% of the improvement in mental health seen by participants needs to be

attributed to MBT for the benefits of the programme to outweigh the costs.
- Given that impacts from other forms of couples therapy have been found to persist for long periods, it seems likely that the benefits of MBT outweigh the costs of the programme.

There will be other non-monetary benefits that were observed in the Hertfordshire evaluation but that cannot be included in our analysis due to a shortage of evidence on their monetary value. For example, data shows improvements on a range of adult and child measures, including significant mental health improvements for the group of parents (including those who did not cross the threshold for clinically diagnosable mental health difficulties); improved couple communication; reduced conflict about children and violent problem solving; and improved outcomes for children.

We would encourage Tavistock Relationships to continue gathering evidence for the effectiveness of interventions to help improve the quality of relationships. For example:

- They have started to use the ONS Life Satisfaction question as part of their routine outcome measures. This will provide a more holistic picture of the wellbeing benefits generated.
- They should develop stronger evidence for the attribution of outcomes to the MBT intervention. Ideally this would be achieved through a Randomised Control Trial. If this is not possible, then they could match participants to a 'synthetic' control group from a major longitudinal survey that incorporate wellbeing measures (e.g., Understanding Society).
- They could incorporate additional outcome measures that can be used to estimate the economic benefits from improved children's outcomes. Although evidence is currently captured that suggests outcomes are positive for children, they cannot currently be converted into economic benefits. To estimate the benefits from reduced demand for children's mental health services, they should consider collecting measures of whether children are receiving mental health support from public services or adopt measures that have been used to assess clinical need for support.

If we can combine the evidence on the importance of relationships in driving wellbeing with ever more robust evidence on how interventions can support and improve these relationships when they go wrong, then we

can help to build a compelling case for a greater policy focus and more support to help improve the lives of families across the UK.

The percentage of families where at least one parent is reporting relationship distress

12%

62%

of parents in the Hertfordshire MBT trial who were in a clinical state of mental distress before the intervention scored below

The wellbeing improvement experienced by parents that move beneath the threshold for diagnosable mental illness is worth

£15,900 - £25,400

The total potential benefits to the MBT programme from improved mental health are estimated at

£0.8m-£3.3m for each year that they are sustained

Introduction

Dissatisfaction with a couple relationship can have serious consequences for the health and wellbeing of parents and children alike.

In this report, we assess the potential economic value of Mentalization Based Therapy for Parenting under Pressure (MBT). This is a programme run by charity Tavistock Relations, which supports parents experiencing relationship difficulties and high levels of conflict. Tavistock Relations aims to improve the quality of life for families by supporting parents' relationships.

Scope of this study

In line with new guidance from HM Treasury, we estimate the potential benefits delivered by the MBT programme in Hertfordshire based on the improvements in wellbeing experienced by the parents that participated.

We use evidence from the evaluation of the Hertfordshire Contract Package Area over the past two years (2019-2021). The evaluation showed the change in clinical measures of mental health experienced by those involved in the scheme. We use existing studies to convert this impact into standardised wellbeing effects so that they can be valued using the HM Treasury guidance.[1]

At present there are two key evidence gaps that affect the nature of the economic analysis that we can complete:

- Evidence on "attribution": understanding what would have happened to those supported through MBT in the absence of the intervention is critical for understanding how much of the outcomes can be attributed to MBT as opposed to other changes occurring in people's lives.
- Evidence on "persistence": knowing how many years the improvements in mental health observed in the Hertfordshire Contract Package Area will be sustained is essential for understanding the scale of benefits.

[1] HM Treasury (2021): *Wellbeing guidance for appraisal; supplementary Green Book guidance*, HM Treasury, accessed here: https://www.gov.uk/government/publications/green-book-supplementary-guidance-wellbeing

As a result, we take a breakeven approach to analysing the potential benefits of MBT; we assess what proportion of the change in wellbeing would need to be attributed to MBT for the benefits to outweigh the costs across a range of scenarios for how long the benefits could be sustained.

There will be other benefits that were observed in the Hertfordshire evaluation that cannot be included in our analysis due to a shortage of evidence on their monetary value. For example, data shows improvements on a range of adult and child measures, including significant mental health improvements for the group of parents as a whole (including those who were above the threshold for clinically diagnosable mental health difficulties); improved couple communication, reduced conflict about children and violent problem solving; and improved outcomes for children.

Background

Being in a partner-relationship is an important driver of adult wellbeing.[2] Yet, adults who are dissatisfied with their relationship are nearly three times more likely to experience a major episode of depression and nearly four times as likely to misuse alcohol.[3] [4] Children exposed to destructive conflict are more likely to experience depression or anxiety, have physical health problems, develop behaviour problems, and do worse at school.[5]break

Prior to the pandemic, around 12% of families were living with at least one parent reporting relationship distress.[6] However, this situation is likely to have been worsened by experiences over the last 20 months. Raised levels of psychological distress were associated with having children at home and having a pre-existing health condition.[7] Financial and food insecurity, increased time spent on childcare, and home schooling were all associated with worsening mental health among parents.[8] All of these factors are likely to have added additional pressure on couples' relationships.

There is evidence that interventions can help to reduce parental conflict and tackle associated negative outcomes.[9] The Reducing Parental Conflict (RPC) programme aims to develop this evidence in the UK. It includes a package of interventions, funded by the Department for Work and Pensions, aimed at reducing parental conflict and improving outcomes for children.

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[2] Clark A et al. (2018)
[3] Whisman M, Bruce M (1999): *Marital dissatisfaction and incidence of major depressive episode in a community sample*, Journal of Abnormal Psychology, 108(4):674-8
[4] Whisman M, Uebelacker L, Bruce M (2006): *Longitudinal association between marital dissatisfaction and alcohol use disorders in a community sample,* Journal of family psychology 20(1):164-7
[5] Early Intervention Foundation (2016): *What works to enhance inter-parental relationships and improve outcomes for children,* DWP ad hoc research report no. 32.
[6] This is the proportion of children in families with more than one parent living as a couple from Department for Work and Pensions (2020): *Parental conflict indicator 2011/12 to 2017/18,* DWP, accessed here: https://www.gov.uk/government/statistics/parental-conflict-indicator-201112-to-201718/parental-conflict-indicator-201112-to-201718
[7] Shevlin M, McBride O, Murphy J, Miller J, Hartman T, Levita L et al. (2020): *Anxiety, depression, traumatic stress and COVID-19 related anxiety in the UK general population during the COVID-19 pandemic.*
[8] Public Health England (2021a): *Parents and carers spotlight,* PHE Spotlight Series, 29th July update.
[9] Early Intervention Foundation (2016)

One of the interventions funded by the RPC programme is Mentalization Based Therapy for Parenting under Pressure, offered by Tavistock Relations. This intervention is the focus of our report.

The Mentalization Based Therapy for Parenting under Pressure programme

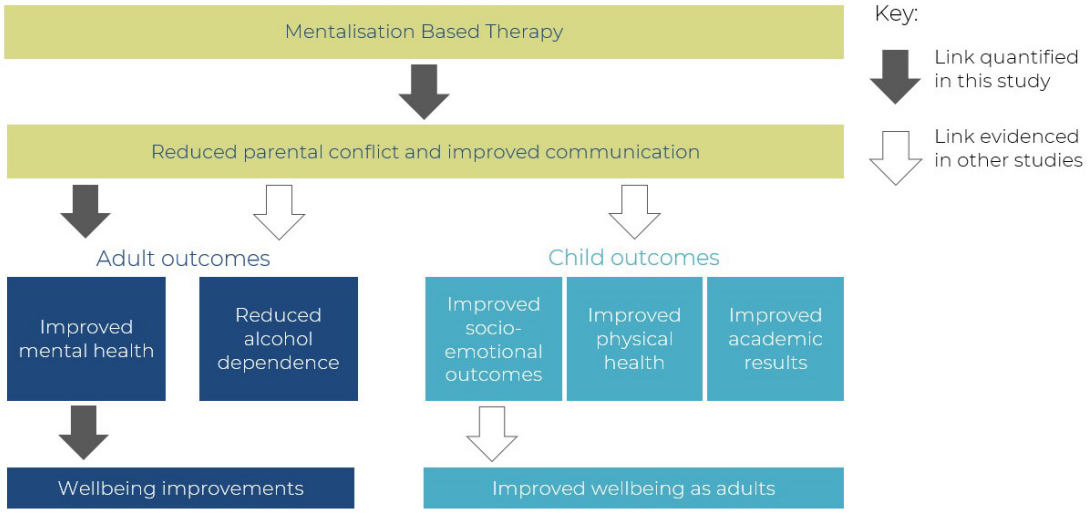
The Mentalization Based Therapy for Parenting under Pressure programme helps parents experiencing relationship difficulties and high levels of inter-parental conflict to:

- Focus on, and think about, not only the feelings and emotions they are experiencing, but those of their children, learning to modify their behaviour as a result.
- Appreciate that their partner's thoughts and feelings may be different to their own, and that their partner may have a different perspective than they do.
- Be curious about possible differences between them and their partner, with a focus on the reasons why their behaviours may differ from one another
- Consider each person's involvement in, and contribution to, the problems of the co-parenting relationship and develop a better appreciation of what their children need.
- Promote awareness of their own and their partner's mental states, feelings, and emotions, with a view to making choices that are in their children's best interests.
- Practice skills of mentalizing, communication and problem solving, particularly in relation to parenting.

The aim of the intervention is to improve both the quality of life for the adults involved in the conflict and the socio-emotional outcomes for the children in a family. The life course model of wellbeing suggests that this should have long-term benefits for the wellbeing of these children as they get older.[10] This is summarised in the logic model in Figure 1.

[10] Clark A, Fleche S, Layard R, Powdthavee N, Ward G (2018): *The origins of happiness,* Princeton

Figure 1. Logic model for the outcomes of the MBT intervention



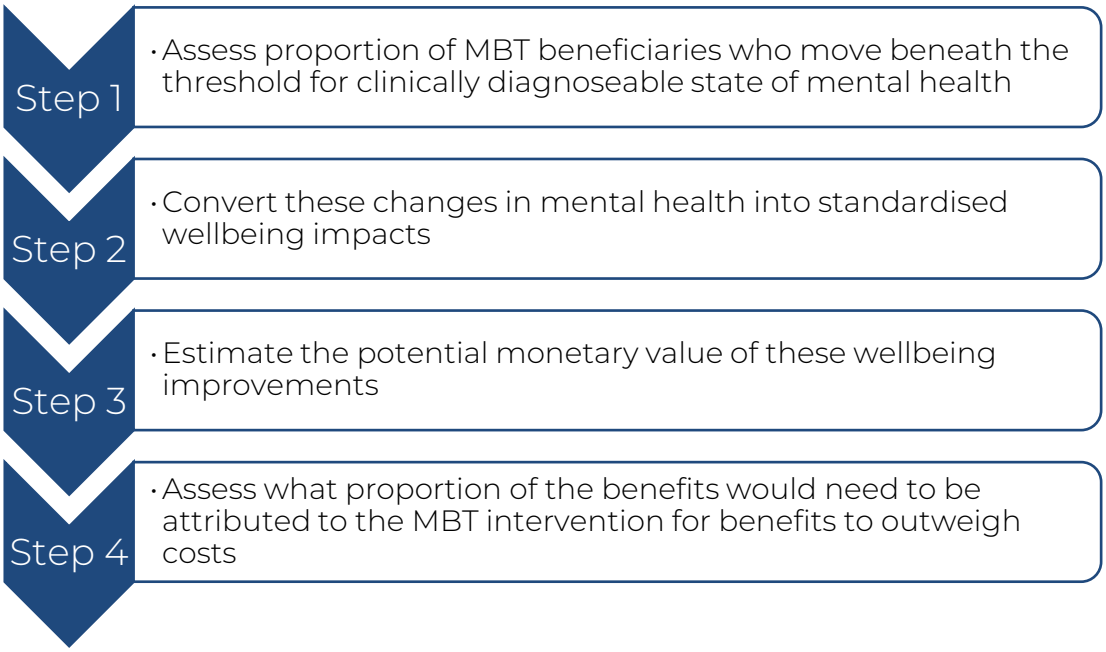
Outcomes for the 579 adults participating in the MBT intervention over 2019-2021 were gathered in the Hertfordshire Contract Package Area. The evidence suggests that over the course of the intervention couples experienced statistically significant improvements in measures of psychological distress and measures of couple communication.

Our report builds on this evidence by reviewing the potential economic value of these outcomes, which enables comparison to the costs of intervention.

Our approach

We take a four-step approach to analysing the potential economic impacts of MBT, summarised in Figure 2:

Figure 2. Four step-process to analysing potential economic impacts



We explain each of these steps in more detail below.

- **Step 1 - We assess the proportion of MBT beneficiaries who moved beneath the threshold for clinically diagnosable state of mental illness over the course of the treatment:** data from the MBT evaluation in Hertfordshire suggests that between 51 (9%) and 130 (20%) of the parents that attended MBT went from having moderate or severe levels of mental distress at the start of the treatment to minimal or mild levels of mental distress after the treatment.[11] For our analysis we use this full range of estimates, incorporating them into low and high scenarios for the impact of the programme.

- **Step 2 - We convert these changes in mental health into standardised wellbeing measures:** to apply the methodology outlined in latest HM Treasury guidance we need to translate

[11] Of 579 parents, data was gathered before and after the intervention for 227. Based on the Beck Depression Inventory, 82 parents were in a clinical state of distress at the start of treatment, and 51 (or 62% of those that started in a state of distress) scored below the clinical threshold at follow-up. We adopt a range of assumptions based on what we assume for those that no data was gathered for – this is explained in Annex A.

improvements in mental health into Wellbeing Adjusted Life Years, known as WELLBYs. [12] [13] We draw on existing research that estimates that one year lived in depression roughly equates to a loss of 1.5 WELLBYs.[14] This suggests that, in total, MBT participants in the Hertfordshire area that moved beneath the threshold for clinically diagnosable state of mental illness experienced an improvement in wellbeing of between 77 and 195 WELLBYs for each year in which an improvement is sustained.

- Step 3 - We estimate the potential monetary value of these wellbeing improvements: latest HM Treasury guidance puts a value of between £10,000 and £16,000 on a 1 WELLBY improvement.[15] This means that the value of the wellbeing improvement experienced by those MBT participants that moved beneath the threshold for clinically diagnosable state of mental illness is the equivalent of between £15,900 and £25,400 per person per year in 2021/22 prices. This totals between £0.8m and £3.3m for the whole programme for each year in which these benefits are sustained.[16]

A key challenge is that we do not have evidence on how long these benefits will persist. We know that other relationship interventions have been demonstrated to have significant effects lasting upwards of 10 years.[17] As such, we look at a range of scenarios for the length of time over which the mental health of participants is improved, ranging from one year to ten years.

[12] HM Treasury (2021)
[13] One WELLBY is equivalent to a one-point improvement in the ONS's Life Satisfaction measure of wellbeing sustained for a year.
[14] Full details provided in Annex A.
[15] HM Treasury (2021), in 2019 prices.
[16] We apply the low end of the range of values for WELLBYs to our low estimate of for the improvement in WELLBYs and the high-end value to the high estimate for the improvement in WELLBYs.
[17] Please see Annex A for further details on relevant research areas.

Figure 3. Present value of benefits from improved mental health of MBT Hertfordshire participants for a range of scenarios[18]

Assumed number of years that benefits persist	Low assumption about the total value of the wellbeing improvement	High assumption about the total value of the wellbeing improvement
1	£0.8m	£3.3m
2	£1.6m	£6.6m
3	£2.4m	£9.8m
4	£3.2m	£12.9m
5	£3.9m	£16.1m
6	£4.7m	£19.1m
7	£5.4m	£22.2m
8	£6.2m	£25.1m
9	£6.9m	£28.1m
10	£7.6m	£31.0m

- **Step 4: We assess what proportion of the benefits would need to be attributed to the MBT intervention for benefits to outweigh costs:** Tavistock estimate that MBT costs £2,113 per parent. This means that for all 579 participants of the Hertfordshire MBT programme it cost around £1.2 million.

  For each scenario, we divide the costs by the benefits to estimate the proportion of benefits that would need to be attributed to the MBT treatment for the benefits from those crossing the mental health threshold to offset the costs. For example, in our high case we estimate that wellbeing benefits after two years from improved parental mental health are £6.6m; this means that just 19% of these benefits need to be attributed to MBT to offset the cost of £1.2m.[19]

[18] Expressing benefits in present values means that long-term future flows are given a reduced weighting compared to near-term flows, known as discounting. This is standard practice for economic evaluations and reflects that there is an innate preference amongst people to receive benefits now rather than in the future.

[19] 1.2/5.7 = 0.21

Limitations of approach

There are a number of limitations to the approach taken:

- We have excluded the potential benefits from all those adults who experienced an improvement in mental health but did not cross the threshold for a clinically diagnosable state of mental illness. These benefits have been excluded as there are no established approaches to converting them to wellbeing improvements.
- We have not included any benefits from the children of parents. Over half of parents responding to the post- intervention survey reported that their children's wellbeing had improved. There are no measures available that quantify this. However, there is potential for these benefits to be substantial - the total lifetime costs of childhood mental health difficulties to the UK economy range from £260,000–£295,000, per child.[20] As a result, benefits may have been significantly under-estimated.
- For simplicity we have not included the benefits from reduced demand for public services as a result of the improvement in mental health. However, estimates suggest that over the course of a year an average adult suffering from depression will cost health and social services an average of £1,084. This is the equivalent of around 5% of the benefits from improved wellbeing.[21] As such, it is unlikely to significantly change our findings.

Overall, it is likely that our estimates are conservative but provide a useful first approximation to the potential benefits from the programme.

[20] Pro Bono Economics (2020): *Assessment of the long-term societal benefits from Child and Adolescent Mental Health Services,* available here: https://www.probonoeconomics.com/assessment-of-the-long-term-societal-benefits-from-child-and-adolescent-mental-health-services

[21] GMCA (2019): *Unit Cost Database,* available here: https://www.greatermanchester-ca.gov.uk/what-we-do/research/research-cost-benefit-analysis/

Results of our analysis

We have assessed the potential benefits from the improvements in mental health experienced by MBT participants across a range of scenarios, depending on how long these benefits persist. In this section we compare these benefits to the cost of the programme to show how much of this improvement in mental health needs to be attributable to the programme in order for the benefits to offset the costs. This is known as a breakeven analysis.

We present the results of our breakeven analysis as a range of scenarios, combining different assumptions for how long the mental health benefits of MBT persist and what proportion of the improvement in mental health can be attributed to MBT (as opposed to changes that occurred due to other factors in people's lives). We can group these scenarios into three different categories:

- Confident benefits will outweigh the costs: These are the combinations of persistence and attribution for which the benefits will outweigh the costs of the programme, even with our "low" assumptions for the wellbeing changes that occurred during the programme.
- Benefits may outweigh the costs: These are the combinations of persistence and attribution for which the benefits will outweigh the costs of the programme, but only in our "high" assumptions for the wellbeing changes that occurred during the programme.
- Benefits do not outweigh the costs: These are the combinations of persistence and attribution for which the benefits will not outweigh the costs of the programme, even where we adopt the "high" assumptions about the effectiveness of the programme.

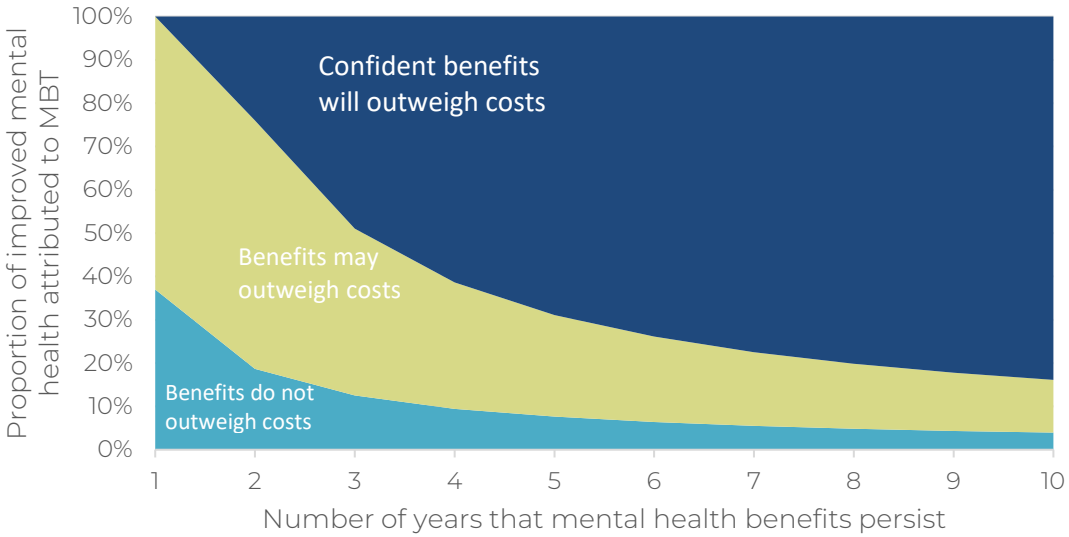
Our findings are summarised in Figure 4, below.

Our analysis demonstrates that:

- Even if mental health benefits persist for just one year, then it is possible that the economic benefits of the programme will outweigh the costs.
- If the improvements in the mental health of participants persist for more than two years, then just 50% of the benefits need to be attributed to MBT for us to be confident the benefits outweigh the costs

- If the benefits persist for 10 years, then less than 20% of the improvement in mental health seen by participants needs to be attributed to MBT for the benefits of the programme to outweigh the costs.

Figure 4: The proportion of wellbeing benefits that need to be attributable to MBT intervention for benefits to outweigh costs



What are reasonable attribution and persistence assumptions for MBT?

Studies evaluating other similar forms of couples therapy have found benefits that persist for as much as 10 years.[22] Likewise, studies that have assessed the impact of MBT to support people with personality disorders have found significant improvements that last for 8 years after the therapy.[23] As such, it is plausible that MBT to reduce parental conflict could have relatively long-lasting effects – towards the high end of the range of scenarios we have explored here.

[22] Cowan C, Cowan P, Barry J (2011): *Couples' groups for parents of pre-schoolers: ten-year outcomes of a randomized control trial, Journal of Family Psychology, 25(2), pp 240*
[23] Bateman A, Constantinou M, Fonagy P, Holzer S (2021): *Eight-year prospective follow-up of mentalization based treatment versus structured clinical management for people with borderline personality disorder,* Personality Disorders: Theory, Research and Treatment, 12(4), 291-299

Likewise, studies that have compared the outcomes from MBT or couples therapy against a control group have found attribution rates ranging from 31% to 89%.[24]

On this basis it seems likely that MBT to reduce parental conflict will generate benefits from improved mental health that outweigh the costs of the programme.

Conclusion

Being in a relationship with a partner is an important driver of adult wellbeing. Yet when these relationships result in conflict it has serious consequences for the health and wellbeing of both the adults and the children involved.

Evidence from the MBT programme in Hertfordshire demonstrates that participating in interventions intended to improve the quality of relationships is associated with significant improvements in mental health as well as couple communication.

- The wellbeing improvement for those parents that moved beneath the threshold for a clinically diagnosable state of mental illness over the course of the treatment is likely to be valued at between £15,900 and £25,400 per person for each year these effects last.
- We estimate that between 51 and 130 participants in the MBT programme in Hertfordshire moved beneath the threshold for a clinically diagnosable state of mental illness between 2019 and 2021, suggesting total wellbeing improvements for participants of between £0.8m and £3.3m for each year that these improvements are sustained.
- Even if mental health improvements are sustained for just one year, then it is possible that the economic benefits of the programme will outweigh the costs.
- If the benefits persist for 10 years, then less than 20% of the improvement in mental health seen by participants needs to be attributed to MBT for the benefits of the programme to outweigh the costs.

[24] See: Bateman A, Constantinour M, Fonagy P, Holzer S (2021) where 74% of MBT participants met primary recovery criteria compared to 51% receiving "structured clinical management" (1-0.51/0.74=31%) and Roddy M, Walsh L, Rothman K, Hatch S, Doss B (2020): *Meta-analysis of couple therapy; effects across outcomes, designs, timeframes and other moderators,* Journal of Consulting and Clinical Psychology, 88(7), 583-596, where average effect size of 0.12 was found for couples on wait lists compared to 1.12 for those receiving couples treatment (1-0.12/1.12 = 89%)

- Given that impacts from other forms of couples therapy have been found to persist for long periods, it seems likely that the benefits of MBT outweigh the costs of the programme.

There will be wider benefits which cannot be included in our analysis due to a shortage of quantified evidence. For example, our analysis does not account for improved outcomes for the children in the families supported or the wellbeing benefits to parents beyond those reflected in crossing a specific threshold in the symptoms of depression.

We would encourage Tavistock Relationships to continue to build on their evidence for the effectiveness of interventions to help improve the quality of relationships. For example:

- They have started to use the ONS Life Satisfaction question as part of their routine outcome measures. This will provide a more holistic picture of the wellbeing benefits generated.
- They should develop stronger evidence for the attribution of outcomes to the MBT intervention. Ideally this would be through a Randomised Control Trial. If this is not possible, then they could match participants to a 'synthetic' control group from a major longitudinal survey that incorporate wellbeing measures (e.g. Understanding Society).
- They could incorporate additional outcome measures that can be used to estimate the economic benefits from improved children's outcomes. Although evidence is currently captured that suggests outcomes are positive for children, they cannot currently be converted into economic benefits. To estimate the benefits from reduced demand for children's mental health services, they should consider collecting measures of whether children are receiving mental health support from public services or adopt measures that have been used to assess clinical need for support.[25]

If we can combine the evidence on the importance of relationships in driving wellbeing with ever more robust evidence on how interventions can support and improve these relationships when they go wrong, then we can help to build a compelling case for a greater policy focus and more support to help improve the lives of families across the UK.

[25] They could also consider using the Strengths and Difficulties Questionnaire which has been linked to longer-term impacts on academic outcomes and earnings.

Annex A – Detailed methodology

In this annex we provide more details of the four key steps used in our analysis.

Step 1: Converting the clinical mental health outcomes of MBT evaluation into standardised wellbeing measures

MBT was evaluated in the Hertfordshire Contract Package Area, between July 2019 and May 2021, using two psychometric measures:

- Clinical Outcomes in Routine Evaluation (CORE), a 34-item measure for psychological distress, used widely in the evaluation of therapeutic interventions; and
- Couple Communication Questionnaire (CCQ), which measures communication, conflict and violent problem solving.

Post-intervention CORE scores were collected from 227 parents. 82 parents were in a clinical state of distress before the intervention and of this group, 51 (62%) scored below the clinical threshold after the intervention.

We focus on CORE, given that this measure provides an established framework to value reductions in clinical depression. From the 34 questions included in the CORE assessment a mean score is established that falls between 0 and 4. The mean scores are then multiplied by 10 to generate final scores. Scores above 10 indicate a clinically significant level of psychological distress.

There are statistically significant improvements in CORE scores and on all dimensions of the CCQ, summarised in Figure 5.

Figure 5. Changes in CORE score in Hertfordshire MBT pilot

Relationship status	Pre-intervention score (standard error)	Post-intervention score (standard error)	Difference	t-statistic for difference	p-statistic for difference
All (n=227)	11.01 (6.38)	7.39 (5.33)	3.61***	9.31	<0.0001
Intact (n=111)	12.32 (6.31)	8.16 (4.99)	4.16***	6.89	<0.0001
Separated (n=115)	9.64 (6.15)	6.53 (5.40)	3.11***	6.28	<0.0001

Note: *** indicates the change in score is statistically significant at the 1% level

The CORE scores can be converted to the Beck Depression Inventory to provide an indication of the proportion of participants that would be classed as clinically depressed. There are 227 parents that completed both the pre-intervention and post-intervention questionnaires. Of these, 82 participants showed moderate/severe depression at pre-intervention. The symptoms of 51 (62%) of these participants had reduced to minimal/mild by the post-intervention assessment, i.e. these participants moved below the threshold for clinically diagnosable mental illness.

There are missing data for 321 parents who competed the pre-intervention questionnaire but not the post-intervention questionnaire. In the CBA, we need to make assumptions about the change in mental health status for all 579 parents. We assume that the number of parents benefiting from a reduction in clinical depression sits in a range between:

- 51 parents in our “low” scenario: this assumes no improvement in mental health, for parents with missing data.
- 130 parents in our “high” scenario: this assumes the same rate of improvement for all 579 participants, as we observe for the 227 parents with complete data.

There may be unobservable differences between parents who don’t complete the survey and to those who do. It is possible that there could be some positive change in scores for the parents with missing follow up data. However, for some parents, the fact that they did not complete a follow up

survey may also be due to ongoing difficulties. As such, it is possible that the parents who did not have a follow up had lower rate of improvement on average compared to parents who completed a follow up

Step 2 - Converting these changes in mental health into standardised wellbeing measures

The Office for National Statistics (ONS) uses four survey questions to measure personal wellbeing, known as the ONS4. The first of these questions asks "Overall, how satisfied are you with your life nowadays?". People respond on a scale from 0 to 10, where 0 is "not at all" and 10 is "completely". The recommended wellbeing metric for economic appraisal is a wellbeing-adjusted life year, or WELLBY: this represents a one-point change on the ONS' life satisfaction scale, for one year.[26]

Layard et al. (2020) quantify the WELLBY impact associated with diagnosable mental illness.[27] Their approach quantifies mental health impacts using Quality-Adjusted Life-Year (QALY) and then converts this in WELLBYs. QALYs are well-established in health economics to evaluate various health treatments on a common scale; they are evaluated on a scale of 0-1, where 0 means that life is not worth living and 1 represents one year of life spent in full health. One year lived in a diagnosable state of mental illness is estimated to reduce QALYs by 0.2 units. QALYs can be translated in WELLBYs, noting that average life satisfaction in the UK is approximately 7.5.[28] [29] Hence, one year lived in depression roughly equates to a loss of 1.5 WELLBYs (= 0.2 QALYs x 7.5).

We multiple this by our range of assumptions for how many parents moved below the threshold for clinically diagnosable mental illness, and

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[26] HM Treasury (2021)

[27] Layard R., Clark A, De Neve J, Krekel C, Fancourt D, Hey N, O'Donnell G (2020): *When to release the lockdown: A wellbeing framework for analysing costs and benefits*, CEP Occasional Paper, 49.

[28] ONS (2021): *Personal well-being in the UK, quarterly: April 2011 to September 2020,* accessed here: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/personalwellbeingintheukquarterly/april2011toseptember2020

[29] MacLennan and Stead (2021) also use average life satisfaction to convert between QALYs and WELLBYs. They used an average value of 7, rather than 7.5 in Layard et al. (2020). They round-up to an average value of 8, then subtract 1 unit. The subtraction accounts for evidence that Life Satisfaction scores of 0-2 are difficult for people to imagine. Hence a QALY value of 0 could be more akin to a LS score of 1. Given that we are adopting the Layard et al. (2020) model in this report, we use 7.5 for consistency. The alternative estimate is, however, accounted for in the range of monetary valuations that we subsequently place on a WELLBY, noting that MacLennan and Stead's estimate underpins the lower end of this range, £10,000 per WELLBY in 2019/20 prices.

find that MBT participants who moved below the threshold for clinically diagnosable state of mental illness experienced an improvement in wellbeing of between 77 and 195 WELLBYs for each year in which an improvement is sustained.

Step 3 - Estimating the potential monetary value of these wellbeing improvements

WELLBYs can be translated into monetary values to support the comparison of different interventions using standard metrics, typically their Net Present Social Value (NPSV) or Benefit Cost Ratio (BCR). HM Treasury recommend a standard value of £13,000 per WELLBY, ranging from £10,000 to £16,000 in 2019/20 prices.[30] This range seeks to:

1. Achieve approximate consistency with existing government values used within CBA, e.g., the Value of a Statistical Life Year (SLY) and the value of a Quality Adjusted Life Year (QALY)).
2. Be consistent with studies on the link between wellbeing and income.
3. Be reasonably straightforward to adopt.
4. Avoid any unintended consequences or disadvantage for certain groups.

The lower bound (£10,000) is set to be as consistent as possible with the existing Green Book recommended QALY value, while the upper bound (£16,000) is based on direct academic evidence on the estimated willingness to pay for changes in life satisfaction.

The recommended approach is to use a linear conversion from wellbeing to money, and to use the full range of values rather than a single point estimate. These values are in 2019/20 prices and so we uprate to 2021/22 prices.[31] Figure 6 summarises the valuations used.

[30] HM Treasury (2021)

[31] We uprate prices using the ONS GDP Deflator, see ONS (2021): GDP deflators at market prices, and money GDP October 2021 (Budget and Spending Review), accessed here: https://www.gov.uk/government/statistics/gdp-deflators-at-market-prices-and-money-gdp-october-2021-budget-and-spending-review

Figure 6. Summary of wellbeing valuations used in study

Wellbeing valuation scenario	Value of 1 WELLBY in 2019/20 prices	Value of 1 WELLBY in 2021/22 prices	Value of 1.5 WELLBYs in 2021/22 prices
Low	£10,000	£10,595	£15,893
High	£16,000	£16,952	£25,428

These “per adult” benefits are then converted into benefits for the whole MBT programme using our alternative assumptions from Step 2 for how many WELLBYs are saved. We calculate a saving of between £0.8m and £3.3m for the whole programme for each year in which these benefits are sustained.

We do not know how many years these improvements in mental health persist for. For this reason we use a range of assumptions from 1 to 10 years after the treatment finished and explore how the benefits vary over this period. We discount benefits at a rate of 1.5% per year; this means that we weigh benefits that occur sooner more heavily than benefits that occur later.[32] Figure 7 summarises our discounted and undiscounted benefits.

[32] This is in line with guidance in HMT (2021) that recommends a discount rate of 1.5% for wellbeing flows.

Figure 7. Summary of benefits, discounted and undiscounted

Assumed number of years that benefits persist	Low assumption about the total value of the wellbeing improvement (£m)		High assumption about the total value of the wellbeing improvement (£m)	
	Undiscounted	Discounted	Undiscounted	Discounted
1	0.81	0.81	3.31	3.31
2	1.62	1.61	6.62	6.57
3	2.43	2.40	9.92	9.78
4	3.24	3.17	13.23	12.94
5	4.05	3.93	16.54	16.06
6	4.86	4.69	19.85	19.13
7	5.67	5.43	23.15	22.15
8	6.48	6.16	26.46	25.13
9	7.29	6.88	29.77	28.07
10	8.11	7.59	33.08	30.96

Step 4: Assessing what proportion of the benefits would need to be attributed to the MBT intervention for benefits to outweigh costs.

Tavistock estimate that MBT costs £2,113 per parent. This means that for all 579 participants of the Hertfordshire MBT programme it cost around £1.2 million.

We divide the costs by the benefits for each scenario to estimate the proportion of benefits that would need to be attributed to the MBT treatment for the benefits from those crossing the mental health threshold to offset the costs.

Figure 7. Summary of benefits, discounted and undiscounted

Assumed number of years that benefits persist	Breakeven attribution rate for low scenario	Breakeven attribution rate for high scenario
1	In excess of 100%	37%
2	76%	19%
3	51%	13%
4	39%	9%
5	31%	8%
6	26%	6%
7	23%	6%
8	20%	5%
9	18%	4%
10	16%	4%

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