



Initial reflections on the results of the large RCT of Mindfulness in Schools MYRIAD (My Resilience in Adolescence) Project

MYRIAD: a useful contribution, even if the initial news headlines have been misleading

The [MYRIAD study](#) is a highly significant and useful contribution to a complex emerging field, and there is much to learn from it. However, the simplistic and dismissive media headlines it produced initially were unfortunate and misleading. They do not reflect the study's important positive findings for teacher burnout and school climate, which are vital for school wellbeing and effectiveness. They also do not reflect that, as the researchers say, the findings for students are 'unexpected' in view of the positive picture emerging from long-term research and need investigation – we suggest the necessarily novice nature of the teachers in the trial may help explain this. We very much support MYRIAD's call for more systemic approaches to mental health and wellbeing in schools, and we explore the nuances of the results and some possible context and explanations for the student findings below.

You can read the research papers from the MYRIAD study, produced in a special edition of the *British Medical Journal*, [here](#).

Summary of the findings and our response

- The [MYRIAD Project](#) explored whether a schools-based mindfulness training (SBMT) initiative was an effective, cost-effective, accessible and scale-able way to promote mental health and well-being in adolescence. It also explored impact on teachers' mental health and wellbeing, and on school climate.
- We welcome this study, which was a large and significant one and makes a major contribution to the field.
- As would be expected from any one study, its findings partly confirm and are partly at odds with previous research on SBMT, including a specific small scale control trial of the specific intervention.¹
- Overall, the SBMT did not help pupils' mental health or well-being more than teaching as usual, although it was slightly better value for money. The student perception of the helpfulness of the curriculum was intermediate, with some youth rating it positively and others negatively. Both these findings were at odds with previous research across the field in general,² and on the curriculum used³ and warrant further investigation.
- Students who engaged with the home practice reported more positive outcomes on their wellbeing. This is a well-known tendency suggesting that mindfulness is more helpful when it is actually practised.
- In our view the findings suggest that:
 - teacher competency was influential and can help explain why the intervention did not have greater impact and acceptability with pupils.

¹ Kuyken, W., Weare, K., Ukoumunne, O., Vicary, R., Motton, N., Burnett, R., . . . Huppert, F. (2013). Effectiveness of the Mindfulness in Schools Programme: Non-randomised controlled feasibility study. *British Journal of Psychiatry*, 203(2), 126-131. doi:10.1192/bjp.bp.113.126649

² Weare, K. and Bethune, A. (2021) Implementing Mindfulness in Schools: an evidence based guide. The Mindfulness Initiative. Implementing Mindfulness in Schools: An Evidence-Based Guide | The Mindfulness Initiative

³ Kuyken et al (2013) *ibid*

We provide further detail on this in the body of this note.

- the rapid scaling up of a particular and previously successful programme, with a resultant mandatory sign-up of teachers, does not appear to be an effective strategy for developing SBMT in an educational setting.
- we should not attempt a mass roll out of universal SBMT to adolescents.
- mindfulness for all age groups should reflect the fact that mindfulness practice is not right for everyone – care should be taken to safeguard vulnerable children and young people, and to keep the process invitational so that no-one feels coerced into it.
- we should take the development of such programmes slowly, invite and train only teachers and schools who positively opt to do so, support teachers and schools new to this teaching, take steps to try to ensure that teachers are reaching the necessary standard and pupils are engaged, and continue to invest in research on what works well and for whom so that the evidence base can keep evolving. All of this will take substantial time and resources.
- The teachers reported lower levels of burnout. This is in line with previous research on the beneficial impacts of mindfulness on teachers own mental health and wellbeing.⁴ We support the

suggestion that more attention be paid to the promotion of teacher wellbeing in general, and the evidence suggests that mindfulness has an important part to play in this.

- The intervention improved the school climate, in the view of the teachers, a finding we welcome. A more positive school climate has been shown to be associated with better mental health in the students.⁵ We agree with the suggestion that there should be more research and development on school climate, on integrating mindfulness within broader strategies, and on education policies and school structures that shape school climate.
- The SBMT helped some pupils (namely older and from poorer schools) more than others (those with mental health problems) less. We agree that these findings suggest 'one size does not fit all' and that we need to find creative and grounded ways to engage students, including co-creation. We also suggest that care needs to be taken with pupils with mental health difficulties and trauma.
- We agree with the general sensible observation that mental health is highly complex and that we need more policy and intervention on the wider systems that affect wellbeing, including poverty and deprivation. The overall evidence continues to suggest that SBMT has an important contribution to make to this effort, when taught well and, ideally, when integrated into wider approaches.

⁴ Zarate, K., Maggin, D. and Passmore, A. (2019). Meta-analysis of mindfulness training on teacher well-being. *Psychology in the Schools*. 56. 10.1002/pits.22308.

⁵ Wang, MT., DeGoll, J. School Climate: a Review of the Construct, Measurement, and Impact on Student Outcomes. *Educ Psychol Rev* 28, 315–352 (2016). <https://doi.org/10.1007/s10648-015-9319-1>

Background

The MYRIAD (My Resilience in Adolescence) Project explored whether a schools-based mindfulness training (SBMT) initiative was an effective, cost-effective, accessible and scale-able way to promote mental health and well-being in adolescence. It also explored impact on teachers' mental health and wellbeing, and on school climate.

The project was an eight-year project, funded by the Wellcome Trust. The research team was a collaboration between the universities of Oxford, Cambridge, Exeter, University College London and others. The mindfulness programme used for the study was the .b curriculum developed by the Mindfulness in Schools Project.

The project involved more than 28,000 young adolescents aged 11- 14, 650 teachers, 100 schools and 20 million data points. The full results of the project can be found at the Myriad website [here](#).

This study is clearly large and significant. It makes a major contribution to the field, and we strongly welcome it, and the insights it can give us into how to develop this important field.

As is to be expected from any one study in a rapidly developing field, its findings are mixed, and partly confirm, add to and are sometimes at odds with, the overall tendency of the findings from previous research.

The main findings and how they fit into the overall picture of evidence

- The teachers reported that they experienced lower levels of burnout immediately after experiencing mindfulness for themselves and training to teach the intervention. This is in line with previous research on the beneficial impacts of mindfulness on teachers' own mental health and wellbeing.
- The SBMT improved the school climate, as perceived by the teachers, including a sense of mutual respect. The effects were still present, although reduced, at one year follow-up. School climate is not often explored as a research outcome, so this is a useful finding that fits into the whole drift of policy and practice in mindfulness, in social and emotional learning, and in mental health in general, towards a whole school, settings based, joined up, approach.
- There was no evidence that this SBMT intervention was superior to teaching as usual (normal PSHE lessons) for students for depression, socio-emotional functioning, or well-being. This finding is not in line with the overall positive conclusions of now a considerable body of research in the field⁶ nor with the impact on stress, depression and wellbeing found in a previous small scale controlled trial of the curriculum.⁷ There was some indication that it was better value for money.
- While the student perception of the helpfulness of the curriculum was

⁶ Weare and Bethune (2021) *ibid*.

⁷ Kuyken et al (2013) *ibid*.

intermediate, there was substantial variation, with some youth rating it positively and others negatively. This was unexpected as mindfulness is usually popular with students. The particular curriculum used for this trial consistently scores between 70 – 80% in terms of acceptability, including in the previous controlled trial.⁸

- The team commented that the failure to show any comparative benefits and the low acceptability rating was unexpected and so they dug deeper into what they were discovering.
- The team investigated differential impact on various types of student, an important and under-researched line of enquiry, made possible by such a large sample. The SBMT was more helpful for older children and those from poorer backgrounds and was unhelpful for those with more mental health problems.

- The students mostly did not respond to the invitation to do the mindfulness home practices. When young people *did* do the home practices, they reported becoming more mindful and enjoying better mental health. This finding is in line with previous research.
- The findings suggest that the degree of skill of the teachers was highly influential. The teachers in this RCT were all new to mindfulness and chosen for research purposes and the resultant levels of competence were not high. On average the teachers in this RCT only reached the level of 'advanced beginner', a score of 3 out of 6 on a competence scale (where 1 is 'incompetent') and defined as just fit for practice 'at a basic level'.⁹ Teachers who fell below this threshold were still included in the trial. The team commented that '*only a small minority were able to teach it really well*'.

Our reflections and how the findings sit with our current guidance

1. The central role of mindfulness for the teacher themselves

The study confirms the findings from many previous studies, reviews and meta-analyses of the importance of mindfulness for the wellbeing of the teacher themselves, including its ability to reduce stress and burnout. [Our implementation guidance](#) emphasizes strongly that effective mindfulness in schools needs to begin with

the teacher, for their own wellbeing and effectiveness. It is also essential to help teachers to first cultivate their own embodied mindfulness before they teach it, which will impact on their authenticity and thus their effectiveness as credible teachers of mindfulness.

⁸ Kuyken et al (2013) *ibid*

⁹ Mindfulness Based Interventions: Teaching Assessment Criteria.
<https://mbitac.bangor.ac.uk/documents/MBITACSummaryPAGESAmends6.7.21.pdf>

2. Mindfulness can help cultivate a positive school climate

The study adds considerably to an emerging area of study; the positive effect of mindfulness on school climate, in this case from the staff's perspective. Our guidance focuses strongly on the need to view mindfulness in schools as an educational process, not just as a one-off medical preventive 'intervention', to focus on the attitudes it cultivates as well as the practices, and to integrate it with whole school processes. This study shows that SBMT can contribute to the kind of positive whole school context, ethos, climate and environment, which research has regularly shown can have a profound effect on students' and staff development and wellbeing.¹⁰

We strongly agree with the recommendations that there be more research and development on school climate, on integrating mindfulness within broader strategies, and on education policies and school structures that shape school climate, all of which we explore in our own guidance. Looking more broadly, we also agree with the authors that mental health is highly complex and that we need more policy and intervention on the wider systems that affect wellbeing, including poverty and deprivation.

3. Not every intervention will show impact

This SBMT intervention was no better than teaching as usual and was not generally popular with students. These are clearly important and concerning findings.

These type of results have occasionally been found before but are not usual, and the authors comment that this was not as they expected. It was also not in line with previous research on the intervention in question, which had positive impacts and was popular with students.

These findings remind us that it is not safe to assume that any one intervention will always show beneficial results. There is much that

can go wrong, especially in the implementation. This is why the study dug deeper into its findings on impacts on pupils.

As we say in our implementation guidance when we explore 'how to read evidence', it is not good science or policy for one study to immediately shift policy and practice. The findings of the new research will therefore now need to be critically assessed and set alongside previous research through including them in new meta-analyses. It will then be easier to assess the extent to which the findings of this important study shift the dial in terms of what is advisable and safe across the many complex aspects of SBMT.

¹⁰ Wang et al (2016) *ibid*

4. One size does not fit all: the need for differentiation

The study helps clarify which types of student SBMT may be most able to help, and where we need to take particular care.

- The SBMT was more helpful for older students. This finding contributes to the ongoing discussion in the research literature on the age and stage of development at which students are most ready for mindfulness interventions of different types, a complex question to which the answers are far from clear at present.
- The intervention also helped students in poorer schools more. This suggests that SBMT can contribute to the overall mission within education towards greater equity and access, and in the face of oft voiced concerns that mindfulness is a middle-class pursuit.
- The study showed that the SBMT did not help students who were particularly vulnerable to mental health problems. Those involved in teaching mindfulness at all levels are increasingly aware of the need to take care of participants' vulnerabilities, particularly around mental

health. Since the protocol for this study, now 7 years ago, there is greater awareness of the need for care and safeguarding around to take student mental health issues and trauma.¹¹ This effort clearly needs to continue in terms of which students receive what kind of SBMT, if any, and the level of support that may be needed.

- The study therefore reinforces insights that are emerging across the field that 'one size doesn't fit all', and that different approaches will be needed for different young people and in different schools. We are only at the beginning of this kind of more nuanced research and development.
- The authors suggest exploring co-creation of approaches with students, linking SBMT with the kind of active and engaged ways students live their lives and what they already like doing, and exploring different student support systems. We strongly agree, particularly in the light of the unexpected and unusual finding that students did not on the whole like this example of SBMT.

5. Scaling up a previously successful intervention for research purposes can have unexpected effects – in particular in affecting teacher quality

The study is also a reminder that we cannot assume that an intervention previously shown to be beneficial will always be so. It particularly highlights the difficulties that arise when an intervention is scaled up as a piece of research, and taught by teachers

required to do so, rather than developed and assessed in its natural setting with the kind of volunteer participants who are usually its subjects.

¹¹ Treleaven, D. Trauma-Sensitive Mindfulness: Practices for Safe and Transformative Healing. Norton.

An earlier controlled study with 522 adolescents and 9 teachers of the same curriculum showed small but significant impacts on depression, stress and wellbeing when compared with teaching as usual, and a score of 7/10 for enjoyment and interest. It concluded that "The findings provide promising evidence of the programme's acceptability and efficacy."¹² It may be significant that:

- All 9 of those teachers came to the programme voluntarily and were already committed to mindfulness, with a good deal of prior training, and practiced mindfulness meditation regularly themselves. The requirement for having established a regular personal meditation practice for 2-3 months continues to be a requirement to train to teach this particular programme.
- The 9 teachers had taught the curriculum many times before they were assessed, and were in schools that were committed to this SBMT programme.

In contrast, in the Myriad RCT:

- In order to try to ensure a common starting point, schools were excluded if they had delivered an SBMT program to their pupils in the previous 12 months, and teachers were excluded if they had completed a personal mindfulness course in the previous 12 months or had ever previously trained to deliver mindfulness to others.
- Thus almost all of the schools and teachers were new to mindfulness teaching and had not previously

expressed any interest. They had free choice about the extent to which they practiced mindfulness meditation themselves during and after their training.

- Their impact was evaluated when teachers had usually only taught the curriculum once.
- On average, after training, the teachers reached the level of 'advanced beginner' point 3 on a 6 point scale for competence (where 1 is 'incompetent') defined as just fit for practice at a basic level. Teachers were not excluded if they fell below this score.
- The study found that teachers who were most skilled in teaching the mindfulness training also had the highest rates of young people practising mindfulness and learning the new skills, and that when the students practised they showed beneficial results. The reverse would also be the case for those with a low level of competence. As the authors say: "it took a lot of training and mentoring to get teachers ready to teach mindfulness to children, and even then, although most became competent, only a small minority were able to teach it really well".
- All of this may explain the overall failure of these teachers to show any impact compared to teaching as usual, or teach the curriculum in a way that students found particularly engaging. This is in contrast to the more impactful and popular previous intervention run by a group of keen volunteer, engaged, experienced and skilled teachers

¹² Kuyken et al (2013) *ibid*

6. Evidence-based research on SBMT should continue, particularly with a view to assessing it in natural context, with volunteer teachers, and particular attention given to teacher training

We strongly agree with the conclusion of the Myriad team that “implementing mindfulness training into schools requires committed staff, adequate resources, efforts to address misperceptions about mindfulness, and even when all these are in place, it takes time ...preparing schoolteachers to offer mindfulness training is hard”.

In our view, these findings suggest we should not attempt a mass roll out of universal SBMT for adolescents. They suggest that rapid scaling up of mindfulness programmes is not an effective strategy, certainly for this age group, and that programmes should be allowed to develop at their natural pace, and only with the kind of volunteer teachers they are designed to train to teach.

Mindfulness for all age groups should reflect the fact that mindfulness training is not for everyone – care should be taken to safeguard vulnerable children and young people, and to keep the process invitational so that no-one feels coerced into it.

The evidence suggests that we should take the development of programmes slowly, invite and train only teachers and schools who positively opt to do so, support teachers and schools new to this teaching, take steps to try to ensure that teachers are reaching the necessary standard, integrate mindfulness into wider whole school processes, and continue to invest in further evidence-based research on what works well and for whom in a schools setting. All of this will take substantial time and resources.

About The Mindfulness Initiative

The Mindfulness Initiative grew out of a programme of mindfulness teaching for politicians in the UK Parliament, and provides the secretariat to the Mindfulness All-Party Parliamentary Group. The Initiative works with legislators around the world who practice mindfulness and helps them to make trainable capacities of heart and mind serious considerations of public policy. It investigates the benefits, limitations, opportunities and challenges in accessing and implementing mindfulness and compassion training and educates leaders, service-commissioners and the general public based on these findings. Visit www.themindfulnessinitiative.org to find out more.

Getting in touch

If you have any questions, suggestions or other feedback on this document please get in touch by emailing info@mindfulnessinitiative.org.uk.

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