⫟⫟ Foundations
What Works Centre for Children & Families

Last reviewed: January 2021

Intervention website: https://mindfulnessinschools.org/teach-dot-b/dot-b-curriculum/

GUIDEBOOK INTERVENTION INFORMATION SHEET

.b ("dot b")

Please note that in the 'Intervention Summary' table below 'child age', 'level of need', and 'race and ethnicities information is **as evaluated in studies**. Information in other fields describes the intervention as **offered/supported by the intervention provider**.

Intervention summary	
Description	.b is a school-based intervention aimed at supporting emotional regulation and sustained attention in young people aged between 11 to 18 years. It is delivered by teachers to students during timetabled school classes, or to groups of students who attend the intervention independently of their classroom schedule.
Evidence rating	3+
Cost rating	1
Child outcomes	• Supporting children's mental health and wellbeing 　- Improved emotional wellbeing 　- Improved resilience 　- Reduced depression 　- Reduced anxiety.
Child age (population characteristic)	11 to 16 years
Level of need (population characteristic)	Universal

Intervention summary	
Race and ethnicities (population characteristic)	• Asian • Black • Mixed ethnic or racial background • White.
Type (model characteristic)	Schools-based
Setting (model characteristic)	• School • Community centre.
Workforce (model characteristic)	• Parenting professional • Teachers.
UK available?	Yes
UK tested?	Yes

Model description

.b (pronounced 'dot-be') is a school-based intervention aimed at supporting the emotional awareness, emotional regulation, and sustained attention of young people aged between 11 and 18 years.

.b is delivered in the classroom by a trained teacher in 10 40-minute sessions with four additional follow-up sessions. The sessions can be spread across the school year and typically occur once a week.

The course provides young people with information about the brain and the role it plays in emotion regulation. Pupils also learn mindfulness techniques to help manage life's inevitable ups and downs. Themes explored include: training the attention, bringing awareness to everyday activities, improving sleep, working with powerful emotions, and noticing the 'good stuff' in life.

Throughout the sessions, a range of mindfulness practices are taught, including attention training, mindfulness of routine daily activities, mindful movement, and grounding practices in response to difficult thoughts or emotions. The practices are built up progressively, with a new element being introduced each week.

All sessions are delivered as structured classroom lessons, including PowerPoint presentations and animations to engage students and explain concepts, teacher-guided exercises to explore mindfulness practice, group discussion to share experiences, worksheets to embed learning, and 'home practice' to try in their own time.

Target population

Age of child	11 to 18 years
Target population	All students attending secondary school and sixth form.

Please note that the information in this section on target population is as **offered/supported by the intervention provider**.

Theory of change

Why			How	What		
Science-based assumption	**Science-based assumption**	**Science-based assumption**	**Intervention**	**Short-term outcomes**	**Medium-term outcomes**	**Long-term outcomes**
Adolescent mental health problems increase the risk of poor school engagement and mental health problems in adulthood.	Effective emotion regulation skills increase young people's engagement in school and resilience to mental health problems in adulthood.	All young people between 11 and 18 years old.	• Young people learn how various brain functions support emotion regulation • Young people learn mindfulness techniques to better regulate their emotions.	• Increased emotional awareness • Increased sustained attention • Increased emotional regulation.	• Improved emotional wellbeing • Increased resilience to stress.	• Reduced risk of mental health problems in adolescence and adulthood.

Implementation requirements

Who is eligible?	All students between 11 and 18 years old.
How is it delivered?	.b is delivered in 10 sessions of one hours' duration each by a trained practitioner to groups of students.
What happens during the intervention?	Young people learn how key areas of the brain contribute to emotion regulation. Effective mindfulness techniques are also introduced and home practice is encouraged.
Who can deliver it?	.b is delivered by secondary school teachers.
What are the training requirements?	The practitioners have 38 hours of intervention training. Booster training of practitioners is recommended.
How are practitioners supervised?	Practitioner supervision is not required for .b.
What are the systems for maintaining fidelity?	Intervention fidelity is maintained through the following processes: • Training manual • Other printed material • Other online material • Face-to-face training • Questions via email and social media.
Is there a licensing requirement?	No
***Contact details**	Contact person: Emily Slater Organisation: Mindfulness in Schools Project Email address: Enquires@mindfulnessinschools.org Website/s: https://mindfulnessinschools.org/teach-dot-b/dot-b-curriculum/ *Please note that this information may not be up to date. In this case, please visit the listed intervention website for up to date contact details.

Evidence summary

.b's most rigorous evidence comes from one RCT conducted in Finland consistent with
Foundations' Level 3 evidence strength threshold. The study observed statistically significant
improvements in children's self-reported resilience in comparison to the active control group.

.b additionally has evidence from a quasi-experimental evaluation conducted in England,
consistent with Foundations' Level 2 evidence strength threshold, observing reductions in .b
pupils' self-reports of stress, emotional wellbeing, and depression.

Child outcomes			
Outcome	**Improvement index**	**Interpretation**	**Study**
Improved resilience	+4	1.35-point improvement on the Resilience Scale (RS14)	1

Search and review

	Number of studies
Identified in search	12
Studies reviewed	2
Meeting the L2 threshold	2
Meeting the L3 threshold	1
Contributing to the L4 threshold	0
Ineligible	9

Individual study summary: Study 1

Study 1	
Study design	RCT
Country	Finland
Sample characteristics	School children in Finland aged between 12 and 15 years.
Race, ethnicities, and nationalities	Not reported
Population risk factors	None reported – this intervention is a universal intervention and targets the general population of young people in secondary schools.
Timing	• Baseline • Post-intervention • 6-month follow-up.
Child outcomes	*Post-intervention* • Improved child resilience (Child report)
Other outcomes	None
Study Rating	3
Citation	Volanen, S.-M., Lassander, M., Hankonen, N., Santalahti, P., Hintsanen, M., Simonsen, N., Raevuori, A., Mullola, S., Vahlberg, T., But, A. & Suominen, S. (2020) Healthy learning mind: Effectiveness of a mindfulness program on mental health compared to a relaxation program and teaching as usual in schools. A cluster-randomised controlled trial. *Journal of Affective Disorders*. 276, 1169–1179.

Brief summary

Population characteristics

This study involved 56 Finnish comprehensive schools, consisting of 210 classrooms with over 3,500 pupils attending 6th, 7th, and 8th grade. The children were between 12 and 15 years old; 51% were boys. 91% of their parents were employed and 67% had attended university.

Study design

Schools were randomly assigned to one of three conditions as follows:

- .b (25 schools, 94 classes, and 1,646 pupils). The .b intervention includes nine weekly 45-minute group sessions and short home practices (the recommended amount of practice being 5 to 6 times per week, approx. 3–15 minutes at a time). The sessions are designed to improve pupils' emotional awareness, sustained attention, and emotional regulation.
- An active control (24 schools, 84 classes, 1,488 pupils). This involved a 9-week standardised relaxation classroom intervention with an equivalent dosage to .b. The sessions promote stress management, sleep, screen time, and experiential relaxation practices, lasting a few minutes each.
- An inactive control (7 schools, 31 classes, 385 pupils). Participants attended their regular classroom curriculum without any additional instruction on emotional regulation, relaxation or stress reduction.

The randomisation process was overseen by an experienced statistician who generated the random allocation sequence implemented by the project team.

Measurement

Assessments took place at baseline (pre-intervention), post-intervention (9 weeks post-baseline), and at a 26-week post-baseline follow-up (6-months post-intervention). Students completed the same three measures at all time points.

Child report measures included the Resilience Scale (RS14), the Beck Depression Inventory (RBDI), and the Strengths and Difficulties Questionnaire (SDQ).

Study retention

Post-intervention

75% (2,625) of the pupils completed measures immediately after completing the intervention. This included 72% (1,177) from the intervention group, 76% (1,124) from the active control, and 84% (324) in the inactive control group.

Six-follow-up

66% (2,312) of the pupils completed measures at follow-up occurring 17 weeks after the intervention was completed. This included 59% (970) from the intervention group, 69% (1,034) from the active control and 80% (308) from the control group.

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Results

Data-analytic strategy

Multi-level models, accounting for school and classroom-level clusters and baseline measures, were used to compare the effect of the three treatment options.

Findings

The study observed statistically significant improvements in the .b pupils' reports of resilience in comparison to the active control condition immediately post-intervention. However, there were no statistically significant differences between the .b pupils and inactive (i.e. business as usual) control and all benefits had faded by the six-month follow-up.

For .b girls, however, lower levels of depression were reported immediately post-intervention and remained evident at the six-month follow-up.

Study 1: Outcomes table

Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Child outcomes					
Child resilience	Resilience Scale (RS14)	d = -.10	Yes (p < 0.038)	1,448	Post-intervention
Child resilience	Resilience Scale (RS14)	d = .01	No	1,278	6-month follow-up
Child depression	Beck Depression Inventory (RBDI)	d =-.04	No	1,448	Post-intervention
Child depression	Beck Depression Inventory (RBDI)	d =-.07	No	1,278	6-month follow-up

Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Child socio-emotional behaviour	Strengths and Difficulties Questionnaire (SDQ)	d =-.08	No	1,448	Post-intervention
Child socio-emotional behaviour	Strengths and Difficulties Questionnaire (SDQ)	d =-.03	No	1,278	6-month follow-up

*All comparisons are between the intervention and active control group.

Individual study summary: Study 2

Study 2	
Study design	QED
Country	United Kingdom
Sample characteristics	Young people aged 12 to 16 from 12 secondary schools in the United Kingdom. Gender representation included 37% females in the intervention group and 23.1% in the control group.
Race, ethnicities, and nationalities	74.9% White 15.9% Asian 6.7% Mixed 1.3% Black 1.3% Other.
Population risk factors	None reported
Timing	- Baseline - Post-intervention 3-month follow-up.
Child outcomes	*Post-intervention* Reduced child depression (Child report)

Study 2	
	3-month follow-up • Reduced child depression (Child report) • Improved child wellbeing (Child report) • Reduced child depression (Child report) • Reduced child stress (Child report).
Other outcomes	
Study Rating	2
Citation	Kuyken, W., Weare, K., Ukoumunne, O. C., Vicary, R., Motton, N., Burnett, R., Cullen, C., Hennelly & S., Huppert, F. (2013) Effectiveness of the Mindfulness in Schools programme: Non-randomised controlled feasibility study. *British Journal of Psychiatry*. 1–6.

Brief summary

Population characteristics

This study involved 522 young people aged 12 to 16 attending 12 secondary schools across England. This included six fee-paying private schools and six publicly funded (including two selective grammar) schools. Schools with varying academic results were represented, including small cohorts in special needs schools in each arm.

74.9% of the pupils were White, 15.9% were Asian, 1.3% were Black, 6.7% were Mixed, and 1.3% reported as Other.

Study design

This feasibility study matched six schools receiving the .b curriculum (with a total of 256 pupils) to six control schools (with a total of 266 pupils). Control schools were selected to match intervention schools on the following criteria: fee-paying private schools vs publicly funded schools, year group, and published school-level academic results.

Schools in the control condition offered no intervention involving mindfulness or relaxation techniques.

Measurement

Pupils completed the same measures at baseline (pre-intervention), post-intervention, and a three-month post-intervention follow-up.

Child report measures included the Warwick–Edinburgh Mental Well-being Scale (WEMWBS), the Perceived Stress Scale (PSS), and the Center for Epidemiologic Studies Depression Scale (CES-D).

Study retention

Post-intervention

93% (487) of the pupils completed the measures at the post-intervention assessment: 99.6% (255) represented the intervention group and 87% (232) the control group.

Three-month follow-up

90% (470) of the pupils completed measures at the three-month follow-up: 95% (244) represented the intervention group and 85% (226) represented the control.

Results

Data-analytic plan

Random-effects linear regression models accounting for baseline characteristics and school and classroom-level clusters were used to compare the two groups. All students were retained in the analysis, regardless of their exposure to the intervention.

Findings

The study observed statistically significant improvements in .b children's reports of depression, stress and wellbeing at post-intervention and at 3-month follow up, in comparison to the control group.

Limitations

The conclusions that can be drawn from this study are limited by methodological issues pertaining to the treatment and comparison groups not being generated by sufficiently robust methods hence why a higher rating is not achieved.

Study 2: Outcomes table

Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Child outcomes					
Child wellbeing	Warwick–Edinburgh Mental Well-being Scale (WEMWBS)		No	465	Post-intervention

Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Child wellbeing	Warwick–Edinburgh Mental Well-being Scale (WEMWBS)		Yes (P = 0.05)	465	3-month follow-up
Child depression	Center for Epidemiologic Studies Depression Scale (CES-D)		Yes (P = 0.004)	465	Post-intervention
Child depression	Center for Epidemiologic Studies Depression Scale (CES-D)		Yes (P = 0.004)	465	3-month follow-up
Child stress	Perceived Stress Scale (PSS)		No	465	Post-intervention
Child stress	Perceived Stress Scale (PSS)		Yes (P = 0.05)	465	3-month follow-up

Other studies

The following studies were identified for this intervention but did not count towards the intervention's overall evidence rating. An intervention receives the same rating as its most robust study or studies.

Campbell, A. J., Lanthier, R. P., Weiss, B. A. & Shaine, M. D. (2019) The impact of a schoolwide mindfulness program on adolescent well-being, stress, and emotion regulation: A nonrandomized controlled study in a naturalistic setting. *Journal of Child and Adolescent Counseling*. 5 (1), 18-34.

Hennelly, S. (2011) *The immediate and sustained effects of the .b mindfulness programme on adolescents' social and emotional well-being and academic functioning* [Unpublished master's thesis, Oxford Brooks University, United Kingdom].

Huppert, F. A. & Johnson, D. M. (2010) A controlled trial of mindfulness training in schools: The importance of practice for an impact on well-being. *The Journal of Positive Psychology*. 5 (4), 264–274.

Johnson, C., Burke, C., Brinkman, S. & Wade, T. (2016) Effectiveness of a school-based mindfulness program for transdiagnostic prevention in young adolescents. *Behaviour Research and Therapy*. 81, 1–11.

Van Schijndel, L. M. (2019) *Effectiveness of a school-based mindfulness training on well-being and executive functioning in early adolescents* [Master's thesis].

Weare, K. (2018) *The evidence for mindfulness in schools for children and young people*. University of Southampton.

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Note on provider involvement: This provider has agreed to Foundations' terms of reference (or the Early Intervention Foundation's terms of reference), and the assessment has been conducted and published with the full cooperation of the intervention provider.