

## Mindfulness-Based Interventions in schools have positive effects on cognitive and socioemotional processes but do not improve behavior and academic achievement



*MBIs have a small, positive effect on cognitive and socioemotional outcomes, but not a significant effect on behavioural and academic outcomes.*

### What is the aim of this review?

This Campbell systematic review examines the effectiveness of school-based MBIs on cognition, behaviour, socioemotional outcomes and academic achievement. The review summarizes 61 studies and synthesizes 35 studies, with a total of 6,207 student participants.

The use of Mindfulness-Based Interventions (MBIs) in schools has been on the rise. Schools are using MBIs to reduce student stress and anxiety and improve socioemotional competencies, student behavior and academic achievement.

MBIs have small, positive effects on cognitive and socioemotional processes but these effects were not seen for behavioral or academic outcomes. The studies are mostly of moderate to low quality. Therefore, further evidence from independent evaluators is needed to be able to evaluate the effectiveness of this type of intervention.

### What did the review study?

With the diverse application and findings of positive effects of mindfulness practices with adults, as well as the growing popularity with the public, MBIs are increasingly being used with youth. Over the past several years, MBIs have received growing interest for use in schools to support socioemotional development and improve behavior and academic achievement.

This review examines the effects of school-based MBIs on cognitive, behavioral, socioemotional and academic achievement outcomes with youth in a primary or secondary school setting. MBIs are interventions that use a mindfulness component, broadly defined as “paying attention in a particular way: on purpose, in the present moment, non-judgmentally”, often with other components, such as yoga, cognitive-behavioral strategies, or relaxation skills training.

### What studies are included?

Included studies used a randomized controlled trial, quasi-experimental, single group pre-post test or single subject design and reported at least one of these outcomes: cognition, academic performance, behaviour, socioemotional, and physiological. Study populations include preschool, primary and secondary school students.



### How up-to-date is this review?

The review authors searched for studies published until May 2015. This Campbell Systematic Review was published in March 2017.

### What is the Campbell Collaboration?

The Campbell Collaboration is an international, voluntary, non-profit research network that publishes systematic reviews. We summarise and evaluate the quality of evidence for social and economic policy, programmes and practice. Our aim is to help people make better choices and better policy decisions.

### About this summary

Ada Chukwudozie and Howard White (Campbell Collaboration) prepared this summary, based on the Campbell Systematic Review 2017:5 Mindfulness-based interventions for improving cognition, academic achievement, behavior, and socioemotional functioning of primary and secondary school students: a systematic review by Brandy R. Maynard, Michael R. Solis, Veronica L. Miller, Kristen E. Brendel (DOI 10.4073/csr.2017.5). Tanya Kristiansen (Campbell Collaboration) did copy-editing and layout. Financial support from the American Institutes for Research for the production of this summary is gratefully acknowledged.



A total of 61 studies are included in the review, but only the 35 randomized or quasi-experimental studies are used in the meta-analysis. Most of the studies were carried out in North America, and others in Asia, Europe and Canada. All interventions were conducted in a group format. Interventions ranged in duration (4-28 weeks) and number of sessions (6-125 sessions) and frequency of meetings (once every two weeks to 5 times a week).

### What are the main results in this review?

MBIs have a small, statistically significant positive effect on cognitive and socioemotional outcomes. But there is not a significant effect on behavioural and academic outcomes.

There was little heterogeneity for all outcomes, besides behavioural outcomes, suggesting that the interventions produced similar results across studies on cognitive, socioemotional, and academic outcomes despite the interventions being quite diverse.

### What do the findings in this review mean?

Findings from this review indicate mixed effects of MBIs in schools. There is some indication that MBIs can improve cognitive and socioemotional outcomes, but no support for improvement in behavior or academic achievement. Despite the growing support of MBIs for adults, youth may not benefit in the same ways or to the same extent as adults.

While not well studied, anecdotal evidence indicates costs and adverse effects of these types of interventions that should be better studied and weighed against the small to no effects on different types of outcomes when considering adoption of MBIs in schools.

These findings should be read with caution given the weakness of the evidence produced by the studies. The high risk of bias present in the studies means that further evidence is needed to evaluate the effectiveness of this type of intervention. The evidence from this review urges caution in the widespread adoption of MBIs and encourages rigorous evaluation of the practice should schools choose to implement it.