



There is evidence that teaching self-monitoring and self-awareness can improve executive function and self-regulation with young children. We define ‘teaching self-monitoring and self-awareness’ as educators helping children to develop an understanding of their thoughts and emotions. They use explicit and implicit teaching¹ to help children to recognise how their feelings can influence their actions and vice versa.

This technical summary covers two broad types of intervention: those designed to support children to label, understand, and manage emotions and mindfulness and yoga.

A small evidence base also explores the effectiveness of self-monitoring and self-awareness by investigating interventions designed to help children to label, understand, and manage their emotions. These typically set out to name and label emotions, teach emotional skills, and identify and practice techniques to manage those emotions and embed them within everyday classroom practice. For more information about how educators can help children to label, understand, and manage emotions involving others, we encourage you to explore the [Personal Social and Emotional Development](#) section of the Evidence Store.

Muir et al. (2023) found evidence that this type of intervention can have a positive impact on various outcomes including attention, working memory, cognitive flexibility, inhibitory control, and self-regulation, though some interventions were not found to have an effect on some outcomes. A further review by Bond (2022) identified a single study that found no effect on executive function and self-regulation outcomes. Finally, a primary study by O’Connor et al. (2014) evaluated an intervention that involved training teachers to deliver classroom sessions with puppets to help children learn about emotions and explore strategies for self-regulation, as well as providing training materials for parents. The study found a positive impact on attention, maths, and reading. Overall, the evidence base for interventions designed to help children better understand, regulate, and manage their emotions is limited but promising, though some studies either found no effect or an effect for some outcomes but not others.

Most of the research we identified for teaching self-monitoring and self-awareness explores the impact of yoga and mindfulness-based interventions for young children. Yoga activities described in the evidence base typically involved yoga postures, movement, and breathing exercises. Mindfulness

activities described in the evidence base typically involved using movement and breathing exercises to encourage children to become more aware of physical sensations, thoughts, and feelings and bring their attention to the present moment, emotions, or task at hand.

Six reviews summarise evidence relating to yoga and mindfulness-based interventions (Bockmann and Yu, 2022; Bond, 2022; Byrd, 2018; Gagne and Nwadinobi, 2018; Muir et al. 2023 and Sun et al. 2021). It was not possible to conclusively identify whether the evidence base is particularly strong for specific executive function and self-regulation outcomes. However, reviews typically found evidence of a positive effect on a variety of outcomes including executive function, attention, working memory,² cognitive flexibility,³ inhibitory control,⁴ self-regulation, and planning. Most reviews also identified some studies that either found no effect or an effect for some outcomes but not others. Mindfulness and yoga-based interventions therefore appear promising ways of implementing the approach of teaching self-monitoring and self-awareness, though the evidence base is still relatively small and additional research is needed to fully explore the effectiveness of this type of intervention.

Children with lower initial levels of self-regulation may experience the greatest improvement in self-regulation from mindfulness interventions (Byrd et al., 2018). Bockmann and Yu (2023) suggest that mindfulness is especially effective for children with lower levels of executive function or self-regulation or for those at high social risk.⁵

There is evidence that some intervention features may be important determinants of how effective mindfulness and yoga interventions are in improving executive function and self-regulation. Bockmann and Yu (2022) found that longer duration and higher frequency mindfulness-based interventions were more effective compared to those of shorter duration or lower frequency. Sun et al. (2021) drew a similar conclusion, finding that longer yoga and mindfulness interventions (of six weeks or more) produced positive effects whereas shorter ones (four weeks or less) were not found to have an effect.

High quality professional development and coaching⁶ is also found to be a common feature of the long-term mindfulness programmes that most effectively improved executive function and self-regulation (Muir et al., 2023). Muir et al. also note

¹ Explicit teaching involves formal educator-directed approaches in which educators explicitly support children to develop specific ideas and skills. Implicit teaching encourages students to think for themselves and promotes the practical application of skills.

² Working memory is an executive function that describes our ability to temporarily hold and manipulate information in our mind. It acts like a mental notepad that helps us complete tasks and solve problems.

³ Cognitive flexibility is an executive function that characterises our capacity to switch between different tasks and cognitive processes. It involves the ability to shift attention and modify thinking in response to changing situational demands.

⁴ Inhibitory control is an executive function skill and describes our ability to control our urges and to think before we react.

⁵ Social risk: measured by an index covering indicators of parental education, employment, income, government-subsidised incomes, family structure, mobility, language, and immigration.

⁶ Coaching typically involves an expert coach providing peer support and assistance on a one to one, regular, and sustained basis.



that the physical movement element of mindfulness-based interventions can provide opportunities for co-regulation,⁷ which may in turn promote improvements in executive function and self-regulation outcomes. Involving family members in self-regulation activities—for example, by providing support for parents or family members to support their child to self-regulate at home—is also noted as potentially being an important feature of effective mindfulness-based interventions (Gagne and Nwadinobi, 2018), though one that also requires further research (Bockmann and Yu, 2022).

Most of the research we identified for this approach involved

research with three-, four-, and five-year-olds. A smaller number of studies involved research with children aged two or six. Studies were only included if the majority of children were aged six or under. Most of the included research is from studies taking place in the United States, with other evidence from a variety of other countries.

If you want to learn more about interventions designed to label, understand, and manage emotions, we encourage you to explore the [Personal Social and Emotional Development](#) section of the Evidence Store.

⁷ Co-regulation involves educators helping children to regulate emotions and co-solve problems. It includes providing emotional reassurance, teaching calming strategies, co-constructing rules, and teaching techniques to reduce or remove stressors.



References

Systematic reviews and meta-analyses

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Included primary studies

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