
Title	Deep breathing and mindfulness for attentional focus, self-regulation and well-being
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Deep Breathing and Mindfulness for Attentional Focus, Self-regulation, and Well-being

By *Fannie Khng Kiat Hui*

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Self-regulation, the ability to monitor and control our emotions, thoughts and behaviours according to situations and goals, is one of the most important human capacities and has been called the “key to success in life” (Baumeister, Leith, Muraven, & Bratslavsky, 2002). Often used interchangeably with the term self-control, self-regulation underpins outcomes from attentional focus and task engagement, physical health, academic performance, social and interpersonal relations, emotional and behavioural control, resilience, to mental/psychological well-being. Large-scale longitudinal studies such as the Dunedin study have found children’s self-regulation (studied as self-control) to predict their health, wealth and criminality in later life—even after considering factors such as intelligence and social background (Moffitt et al., 2011).

A major role of education is to prepare children for life. With changing notions of what children need to thrive in their future world, schools are increasingly aware of the importance of building students’ capacities for self-regulation. In a series of studies conducted in local schools, we found two sets of techniques we taught to students to be effective for their self-regulation.

Deep Breathing

The first set of studies examined the immediate effect of deep breathing on regulating adverse effects of test anxiety.



Linked to negative outcomes ranging from poor academic achievement to suicide ideation, test anxiety is a serious problem estimated to afflict 10% to 40% of students from as young as seven. In one study, we spent 5 to 10 minutes teaching a group of Primary 5 students to practice slow, deep, abdominal breathing before a timed math test. Compared to Primary 5 students in a control group who performed the same tasks without the deep breathing practice, students who took a minute of deep breaths before the test reported a significantly greater reduction in anxious feelings just before the test, allowing for a better state-of-mind (balance of adaptive and maladaptive thoughts) during the test, resulting in a greater improvement in test scores (Khng, 2017). Preliminary evidence from a follow-up study using electroencephalography (EEG)—a noninvasive method of recording brain activity, also in Primary 5 students—suggested that deep breathing may increase attentional focus by increasing the “brain power” allocated to the regulation of attention (Khng & Mane, 2018).

Mindfulness

The second set of studies examined longer-term effects of mindfulness-based

practices on students’ cognitive, emotional and behavioural regulation. Mindfulness-based practices cultivate the ability to pay full attention to your present moment in an open and non-judgmental manner, promoting self-regulation by creating the space to respond rather than react. The benefits of mindfulness-based practices are well documented in the scientific literature; standardised school-based programmes have been developed and used around the world. We piloted the US-based Mindful Schools programme with two classes in a local post-primary school over 15 weeks, in twice-weekly 30-minute sessions. Although the extent of benefit varied across classes and students, the programme was generally well received by students and teachers. A substantial proportion of students reported using the mindfulness techniques learnt to help them in their daily lives, especially in terms of emotional/behavioural regulation. Teachers reported observing positive effects in between 50% to 90% of their students, including better interpersonal relations, and increased ability to settle down in class and to pay attention—resulting in increased teaching time available in one class (Khng & Tan, submitted).

► Deep breathing and mindfulness-based practices are thus two sets of evidenced-based tools that can be taught to students for their self-regulation and well-being. Several schools in Singapore have already started introducing some form of these practices to their students (Khng, 2018). Evidence from our studies should bring confidence to more schools joining them.

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