## Abstract

**Background:** Trainee psychotherapists in the fields such as clinical psychology, counselling, and social work commonly face a significant level of stress during professional training. It is suggested that mindfulness-based interventions (MBIs), including Mindfulness-based Stress Reduction and Mindfulness-based Cognitive Therapy, can reduce stress in mental health professionals. However, whether it applies to trainees is not well established. This review summarized the effect of MBIs on stress in trainee psychotherapists. Indirect evidence of mindfulness as the mechanism of change in MBIs was also reviewed.

**Method:** 7479 quantitative studies published between 2001 and 2021 were systematically examined. Four meta-analyses were performed, focusing on the effect of stress reduction of MBIs when compared to baseline (Study 1) and to control at post-intervention (Study 2), and mindfulness enhancement when compared to baseline (Study 3) and to control (Study 4). **Results:** 16 studies were meta-analysed (n = 551), with six, four, 13, and seven effect sizes included in each meta-analysis, respectively. Study 1 found a significant small to medium stress reduction (g = -0.47). In Study 2, the effect was small and non-significant (g = -0.26). Study 3 found a medium to large effect of mindfulness enhancement (g = 0.60). Study 4 found a medium effect (g = 0.49). Moderate to high heterogeneity was found only in Studies 1 and 2, and no significant influence of publication bias was observed.

**Conclusions:** The present review found a small stress reduction effect of MBIs with high uncertainty. A robust effect of mindfulness enhancement was found, providing indirect evidence that mindfulness can be a mechanism of change.

Keywords: trainee psychotherapists, stress, MBI, mindfulness, psychotherapy training