

## Mindfulness and Mental Resilience Training for Pilots: Enhancing Cognitive Performance and Stress Management

**Authors :** Nargiza Nuralieva

**Abstract :** The study delves into assessing the influence of mindfulness and mental resilience training on the cognitive performance and stress management of pilots. Employing a meticulous literature search across databases such as Medline and Google Scholar, the study used specific keywords to target a wide array of studies. Inclusion criteria were stringent, focusing on peer-reviewed studies in English that utilized designs like randomized controlled trials, with a specific interest in interventions related to mindfulness or mental resilience training for pilots and measured outcomes pertaining to cognitive performance and stress management. The initial literature search identified a pool of 123 articles, with subsequent screening resulting in the exclusion of 77 based on title and abstract. The remaining 54 articles underwent a more rigorous full-text screening, leading to the exclusion of 41. Additionally, five studies were selected from the World Health Organization's clinical trials database. A total of 11 articles from meta-analyses were retained for examination, underscoring the study's dedication to a meticulous and robust inclusion process. The interventions varied widely, incorporating mixed approaches, Cognitive behavioral Therapy (CBT)-based, and mindfulness-based techniques. The analysis uncovered positive effects across these interventions. Specifically, mixed interventions demonstrated a Standardized Mean Difference (SMD) of 0.54, CBT-based interventions showed an SMD of 0.29, and mindfulness-based interventions exhibited an SMD of 0.43. Long-term effects at a 6-month follow-up suggested sustained impacts for both mindfulness-based (SMD: 0.63) and CBT-based interventions (SMD: 0.73), albeit with notable heterogeneity.

**Keywords :** mindfulness, mental resilience, pilots, cognitive performance, stress management

**Conference Title :** ICPABS 2024 : International Conference on Psychological and Behavioural Sciences

**Conference Location :** Paris, France

**Conference Dates :** June 20-21, 2024