International Platform of Registered Systematic Review and Meta-analysis Protocols

INPLASY

The effectiveness of intersecting mindfulness, neuroeducation and meta-cognition on improving perceived well-being and job satisfaction: a systematic review to define “neuroawareness”

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Risk of bias assessment.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 July 2025 and was last updated on 30 July 2025.

INTRODUCTION

Review question / Objective Can cultivating Neuroawareness through structured cognitive strategies - involving the combined efforts of mindfulness, neuroeducation and meta-cognition - lead to measurable improvements in psychological well-being and cognitive (job-)performance for the general publication in comparison to isolated strategies?

Condition being studied General population; stress, burnout and depression are being measured.

METHODS

Participant or population General population, generally working (part of hypothesis).

Intervention Neuroawareness (mindfulness, neuroeducation, meta-cognition).

Comparator Isolated strategies.

Study designs to be included Meta-analysis, systemic review, regression analysis.

Eligibility criteria Studies were included if they:
(1) were empirical studies investigating the effects of a structured cognitive intervention designed to enhance neuroawareness (e.g., mindfulness-based programs, neuroeducation interventions, meta-cognitive training);
(2) reported quantitative outcomes related to psychological well-being (e.g., anxiety, depression, stress, general well-being, job satisfaction) or cognitive performance (e.g., job performance);
(3) included a control or comparison group (for intervention/control designs) or pre- and post-intervention data (for pre-post designs);
(4) were published in peer-reviewed journals.
Exclusion criteria included;
(1) studies that are qualitative by design or output;
(2) review studies;
(3) dissertations without published counterparts;
(4) studies not involving human participants.

Duplicates were removed, and titles, abstracts, and full texts were screened by two independent reviewers to determine eligibility. Discrepancies were resolved through discussion or consultation with a third reviewer.

Information sources A systematic literature search was conducted across major electronic databases, including PubMed, PsycINFO, Web of Science, Scopus, from 2013 up to 2025. The search strategy employed a combination of keywords related to "neuroawareness," "mindfulness," "neuroeducation," "meta-cognition," "cognitive strategies," and their synonyms, crossed with terms for "psychological well-being," "mental health," "anxiety," "depression," "stress," "job satisfaction," "cognitive performance," and "job performance."

Main outcome(s) Results indicate that multi-method interventions yield moderate-to-strong effects on well-being and stress reduction, with more modest improvements in task performance and job satisfaction. While each component has demonstrated effectiveness independently, its synergistic potential remains underexamined in both research and practice.

Quality assessment / Risk of bias analysis The risk of bias for each included study was independently assessed by two reviewers using the Cochrane Risk of Bias tool for randomized controlled trials (RCTs). Domains assessed included randomization sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, selective reporting, and other biases (Appendix 2). Discrepancies were resolved through discussion.

Strategy of data synthesis For each eligible study, the following data were extracted: author(s), publication year, study design, participant characteristics (e.g., sample size, demographics), intervention type (e.g., specific mindfulness program, type of neuroeducation), duration and intensity of the intervention, outcome measures, and relevant statistics (e.g., means, standard deviations, sample sizes for intervention and control groups, effect sizes, pre- and post-intervention scores). When effect sizes were not directly reported, they were calculated from available data using standard formulas (e.g., for standardized mean differences). For studies reporting multiple time points or multiple measures for a single construct, the most relevant post-intervention data point and the primary measure of each construct were prioritized to avoid unit-of-analysis errors. Hence meta analytic study was done on several segments of the dataset that share similar characteristics.

Subgroup analysis The current draft does not include a formal subgroup analysis. Conducted were instead meta-analyses by outcome domain (e.g. well-being, stress, anxiety, etc.), but no comparisons across study-level or intervention-level subgroups (e.g. single- vs. multi-component programs, high- vs. low-quality studies, clinical vs. non-clinical samples, short vs. long interventions).

Sensitivity analysis None since no high risk of bias studies were included.

Country(ies) involved Germany.

Keywords Neuroawareness; mindfulness; neuroeducation; metacognition; cognitive performance; well-being; workplace psychology; interdisciplinary intervention.

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