

INVESTIGATING FACTORS CONTRIBUTING TO VARIATIONS IN PERFORMANCE MEASURES AMONG YOGA PRACTITIONERS

Abstract

Background: Yoga practice has been associated with improvements in postural performance and affective functioning; however, considerable inter-individual variability is observed in these outcomes. The factors contributing to such variability remain incompletely understood. Grounded in constitutional frameworks from Ayurveda and the concept of practice duration as an experiential factor, this thesis examined whether body-type typologies (Somatotype and Prakriti) and yoga practice duration are associated with variations in postural accuracy, postural stability, and affective states among yoga practitioners.

Methods: Three interconnected empirical studies were conducted. Study 1 employed a cross-sectional design to examine somatotypes (Trunk Index) and visually assessed Prakriti in yoga-naïve young adults, focusing on postural performance. Study 2 used AyuSoft, a comprehensive and validated Prakriti assessment tool, to examine postural and affective outcomes across Prakriti types and yoga practice-duration categories among experienced practitioners. Study 3 implemented a quasi-experimental pre-post design with Prakriti-matched yoga and control groups, administering an eight-week structured yoga intervention to Prakriti-matched novice participants. Postural accuracy, postural error frequency, and affect (Positive and Negative Affect Schedule) were assessed. Statistical analyses included ANCOVA in Study 1, MANCOVA in Study 2, and non-parametric tests (Wilcoxon signed-rank test, Mann-Whitney U test, and Quade's rank MANCOVA) in Study 3.

Results: Study 1 did not identify constitution-linked differences in postural performance among yoga-naïve participants. Study 2, using a comprehensive Prakriti assessment, demonstrated differences in postural performance between Prakriti types, with Kapha practitioners exhibiting greater postural steadiness and Vata practitioners showing greater variability; longer yoga practice duration was associated with better postural and affective outcomes. Study 3 showed that the eight-week yoga intervention was associated with significant within-group improvements in postural and affective measures among both Vata- and Kapha-classified participants, whereas no comparable changes were observed in control groups. Post-intervention differences between yoga and control groups were observed within the Vata classification but not within the Kapha classification.

Conclusion: Across three studies, the findings indicate that constitutional classification and yoga practice duration are relevant factors associated with variation in postural and affective outcomes among yoga practitioners. While constitution-linked differences were not evident among yoga-naïve individuals, they emerged with comprehensive Prakriti assessment and practice duration. Short-term yoga practice was associated with measurable changes in postural and affective measures among yoga group participants, while no comparable changes were observed in controls. These findings support the relevance of incorporating constitutional framework and practice duration when examining individual variability in yoga-related outcomes.