**Supplementary Material 5. Motor skill transfer after single practice.**

**Methods**: Motor skill transfer, which is an approach to investigate motor skill retention from the perspective of generalization [1], was investigated by grouping studies according to the number of practice sessions performed during acquisition (single vs. extended practice). To investigate the transfer of acquired motor skills to untrained tasks, we calculated group mean differences using consecutive retention and transfer test scores (e.g., transfer score 24 h – retention score 24 h). This method was adopted to reduce the influence that memory reactivation may have on motor memory processes [2, 3]. Analyses were performed following the same procedures implemented in the main meta-analyses. However, we did not perform meta-regression analyses due to the limited effect sizes available.

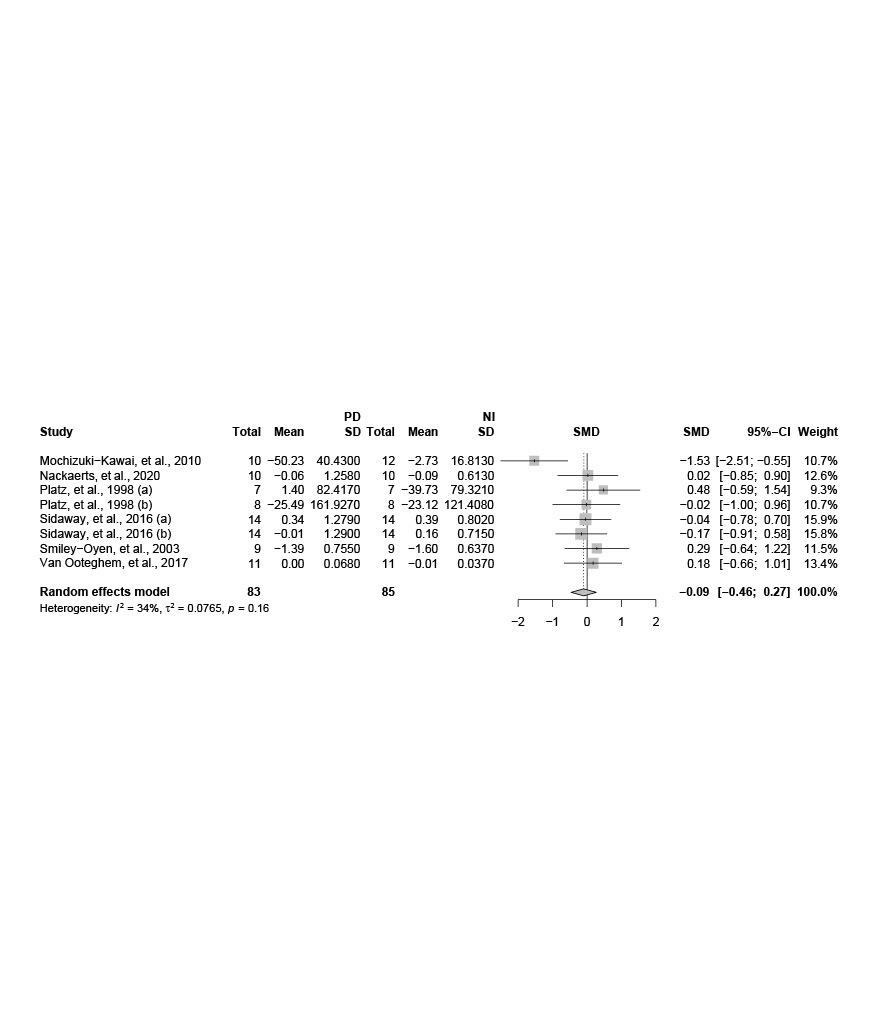
**Results**: Motor skill transfer was investigated in seven [4-10] and one [11] studies after a single session and extended motor practice, respectively. Funnel and forest plots pertaining to motor skill transfer are reported below.

**Motor skill transfer: Funnel plot.**

Chart, line chart

Description automatically generated

**Motor skill transfer: Forest plot.**



**Discussion**: Our results pertaining motor skill transfer following a single practice showed no difference between persons with the PD and NI group (SMD = -0.09; 95% CI = -0.46; 0.27; *p* = 0.6117; N = 8; I2 = 34.0%). These findings are relevant given that successful motor skill transfer would enable persons with PD to generalize and implement their motor skills in different contexts and tasks of daily living. However, our results should be considered preliminary and interpreted with caution for several reasons. First, only a limited number of effect sizes were available for the analysis (N = 8). Second, a few studies included in our review that observed motor skill transfer deficits in persons with PD [4, 12-14] could not be used in our analysis since it was not possible to obtain the data. For example, Isaias et al. [14] using a VAT, found deficits in motor skill transfer in persons with PD relative to NI individuals. Similarly, Onla-Or et al. [13] observed that persons with PD have greater contextual interference than NI individuals in a SMT. Third, it is also plausible that our results were influenced by other factors such as the type of task implemented and the type of feedback provided. In addition to these considerations, previous studies have consistently observed that persons with PD have important deficits in performing acquired motor skills in new contexts and task-switching [15-17]. Since motor skill transfer and generalization are important in PD, further research is needed to confirm and expand our preliminary results.

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