

Scientific Evidence of Effects for Moto Tiles

Physical abilities:

Denmark:

1. Randomized controlled trial (RCT) with seniors average 83 years old
Significant effect: Balancing test (+149%), Chair-stand (CS), Timed-up-and-go (TUG)
2. Trial shows increased skills in balancing and mobility (Dynamic Gait Index)
increased leg strength by 100%
increased height by 1-2cm
3. Trial with frail seniors
Increase performance in balancing test by 80%
Don't use walking aids (rollator) anymore
After merely 1 hour play on Moto tiles
4. Test with community dwelling seniors
Significant effect: CS, TUG, 6MWT, Line Walk balancing

Japan:

5. *Significant effect:* TMD, MMD, PACE left CV, Functional Reach (FR), TUG, and 30-CS
6. *Significant effect:* Chair-stand (CS), Functional reach (FR), TUG, KCL (overall, physical, and memory)
Kihon Check List (KCL) is a reliable tool to predict vulnerability and high risk of care help dependency, and it is correlated with Long-Term Care Insurance (LTCI).

PR China:

7. RCT with seniors with mild to moderate dementia
Significant effect: Berg Balance Test (BBS), TUG, FTSST (5 * CS)

Taiwan:

8. *Significant effect:* Activities-specific Balance Confidence (ABC) scale, TUG, Center of mass (COM)–center of pressure (COP)

Cognitive abilities:

PR China:

9. RCT with seniors with mild to moderate dementia
Significant effect: Montreal Cognitive Assessment (MoCA) and Digit Span Test forward/backward (DST)
10. RCT with seniors with dementia
Significant effect: Reaction time on Visual Search, Accuracy on n-back

Japan:

11. increased activity in prefrontal cortex (concentration and focus) shown with NeU brain scanning
Significant effect on standard cognitive tests
12. *Significant effect*: Stroop and Flanker test

Denmark:

13. *Significant effect*: Moto scores correlate with standard health tests (TUG, CS, FSST)

Summary:

All clinical tests consistently show and verify that:

Total of 4 – 6 hours play on Moto Tiles gives statistical significant effects on physical functional abilities and cognitive abilities.

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