

عنوان مقاله:

A Selected Balance Exercise Combined with Anodal tDCS Was Beneficial in Balance Performance but not in Working Memory in Healthy Older Adults

محل انتشار:

نشریه بین المللی کنترل و یادگیری حرکتی، دوره 5، شماره 2 (سال: 1402)

تعداد صفحات اصل مقاله: 9

نویسندگان:

Mehrshad Mehrdadian

Esmaeel Saemi

Georgian Badicu

Mohammadreza Doustan

Tomofumi Yamaguchi

خلاصه مقاله:

Background: Transcranial direct current stimulation (tDCS) has recently drawn attention as an inexpensive, painless, safe, and effective technique to improve motor performance and cognitive function in older adults. This study examined the effects of a selected balance exercise combined with anodal tDCS on balance performance in older adults. Methods: Twenty-four healthy older adults (Mean age \pm SD= 69.79 \pm 5.50 years) participated in this study. The participants were randomly assigned into a real tDCS or sham tDCS groups. The participants in the real tDCS group received 2 mA anodal tDCS over the left primary motor cortex (M1) for 20 min while in the sham group they received a sham tDCS for the same duration. The participants performed a selected balance exercise program for 50 min following tDCS. Training was conducted 2 sessions per week for 8 weeks (16 sessions). Berg balance scale (BBS), timed up and go test (TUG) and working memory test (2-back task) were measured before (baseline), after 8 weeks of the training, and 4 weeks of follow-up. Results: Compared to sham tDCS group, BBS and TUG were significantly improved in real tDCS group after the training and 4 weeks of follow-up, however, this intervention could not affect working memory. Conclusion: In summary, these results indicate that the selected balance exercise program combined with anodal tDCS can improve balance performance but not working memory in older adults.

کلمات کلیدی:

Non-invasive brain stimulation, Balance, Working memory, Older adults, Motor performance

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1756467>

