**Table1:** Demographic data and baseline values for the participants in M1 a-tDCS (1mA), M1 a-tDCS (2mA), M1 c-tDCS (1 mA), M1 c-tDCS (2 mA) and sham groups (Mean± SD)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Group (Mean± SD)** | | | | | **P value** |
| **M1 a-tDCS (1mA)** | **M1 a-tDCS (2mA)** | **M1 c-tDCS (1 mA)** | **M1 c-tDCS (2 mA)** | **Sham tDCS** |
| **Age (year)** | 20.93±1.22 | 22.20±3.25 | 21.87±1.46 | 22.19±2.01 | 22.00± 3.29 | 0.59 |
| **Gender (female/male)** | 5/10 | 5/10 | 5/10 | 11/5 | 10/6 | 0.38 |
| **Reaction Time of Block 2 (Second)** | 132.2± 27.57 | 130.13± 14.91 | 136.73± 33.44 | 133.87±18.46 | 131.75±22.01 | 0.96 |
| **Error Rate of Block 2 (Number)** | 3.40±1.80 | 2.67± 2.02 | 2.80± 2.62 | 2.44± 2.19 | 3.37± 3.20 | 0.74 |

SD: Standard Deviation, M1: Primary Motor Cortex, a-tDCS: Anodal Trans-Cranial Direct Current Stimulation, c-tDCS: Cathodal Trans-Cranial Direct Current Stimulation

**Table 2:** Repeated MeasuresANOVA results for the effects of M1 a-tDCS (1mA), M1 a-tDCS (2mA), M1 c-tDCS (1 mA), M1 c-tDCS (2 mA) and sham groups on response time and errors rate

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Outcome main and interaction effects of ANOVA measures** | | | **F (Df)** | **P value** | **Effect Size** |
| **Reaction**  **Time** | **Main** | Group | 0.268 | <0.001\* | 0.27 |
| Time | 0.622 | <0.001\* | 0.62 |
| **Interaction** | Group× Time | 0.203 | <0.001\* | 0.20 |
| **Errors rate** | **Main** | Group | 0.187 | 0.005\* | 0.19 |
| Error Number | 0.114 | <0.001\* | 0.12 |
| **Interaction** | Group× Error Number | 0.182 | <0.001\* | 0.18 |

SD: Standard Deviation, M1: Primary Motor Cortex, a-tDCS: Anodal Trans-Cranial Direct Current Stimulation, c-tDCS: Cathodal Trans-Cranial Direct Current Stimulation

**Table 3:** One-wayANOVA results for the effects of M1 a-tDCS (1mA), M1 a-tDCS (2mA), M1 c-tDCS (1 mA), M1 c-tDCS (2 mA) and sham groups on online, offline learning and consolidation of learning

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Group (Mean± SD)** | | | | | **P value** |
| **M1 a-tDCS (1mA)** | **M1 a-tDCS (2mA)** | **M1 c-tDCS (1 mA)** | **M1 c-tDCS (2 mA)** | **Sham tDCS** |
| **Reaction Time** | **Online Learning** | 52.60±30.80 | 45.53±17.90 | 15.20±31.12 | 36.37±17.66 | 22.38± 26.92 | 0.001\* |
| **Offline learning** | 50.60±27.65 | 48.87±14.89 | 18.00±34.92 | 43.19±24.97 | 25.88±28.64 | 0.001\* |
| **Consolidation of learning** | 2.33± 7.57 | 6.20± 12.71 | 3.86± 23.65 | 7.56±13.30 | 8.62±23.62 | 0.92 |
| **Error rate** | **Online Learning** | 3.80±2.70 | 2.60±2.13 | 0.20±4.00 | 0.50±3.18 | 0.06± 4.97 | 0.01\* |
| **Offline learning** | 3.20±1.97 | 2.33±2.09 | -1.73±3.84 | 1.12±1.96 | -0.50±2.73 | <0.001\* |
| **Consolidation of learning** | 0.07± 0.59 | 0.4± 0.83 | -0.67±2.58 | 0.56±2.19 | 0.25±2.26 | 0.43 |

SD: Standard Deviation, M1: Primary Motor Cortex, a-tDCS: Anodal Trans-Cranial Direct Current Stimulation, c-tDCS: Cathodal Trans-Cranial Direct Current Stimulation