**Table 1. Hierarchical regression analysis for the sequential paradigm with 3 bar, high memory load condition.**

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| --- | --- |
|  | **Statistical reports** |
| **Independent variables** | **Recall parameters**  **Error/ Precision/ von Mises SD/ Target proportion/ Swap error/ Uniform proportion / Nearest neighbor (*F*, *P*)** |
| **Group** | (28.18, < 10-9\*) / (25.23, < 10-9\*)/ (26.79, < 10-9\*)/ (11.04, < 10-4\*)/ (7.11, < 0.002\*)/ (5.50, < 0.006\*)/ (29.26, < 10-10\*) |
| **Group**  **Gender** | (22.47, < 10-8\*)/ (19.90, < 10-7\*)/ (20.37, < 10-7\*)/ (9.98, < 0.0002\*)/ (7.22, < 0.002\*)/ (4.38, < 0.02\*)/ (22.64, < 10-8\*)  (3.89, = 0.051)/ (4.16, < 0.05\*)/ (8.71, < 0.004\*)/ (0.002, = 0.97)/ (0.47, = 0.49)/ (0.57, = 0.45)/ (7.82, < 0.007\*) |
| **Group**  **Age** | (18.84, < 10-7\*)/ (17.68, < 10-6\*)/ (18.53, < 10-6\*)/ (6.76, < 0.002\*)/ (6.32, < 0.003\*)/ (2.85, = 0.06)/ (19.60, < 10-7\*)  (9.39, < 0.003\*)/ (7.80, < 0.007\*)/ (5.51, < 0.03\*)/ (5.24, < 0.03\*)/ (0.07, = 0.79)/ (15.04, < 0.0002\*)/ (12.04, < 10-3\*) |
| **Group**  **Education** | (14.03, < 10-5\*)/ (12.79, < 10-4\*)/ (15.22, < 10-5\*)/ (4.17, < 0.02\*)/ (4.33, < 0.02\*)/ (0.90, = 0.41)/ (14.2, < 10-5\*)  (8.21, < 0.005\*)/ (5.46, < 0.03\*)/ (3.21, = 0.08)/ (6.64, < 0.02\*)/ (0.52, = 0.47)/ (10.08, < 0.002\*)/ (9.57, 0.003\*) |
| **Group**  **Cognitive abilitya** | (19.26, < 10-7\*)/ (18.23, < 10-6\*)/ (19.69, < 10-7\*)/ (5.71, < 0.005\*)/ (3.41, < 0.04\*)/ (2.95, = 0.056)/ (20.93, < 10-7\*)  (14.91, < 10-3\*)/ (6.81, < 0.02\*)/ (5.68, 0.02\*)/ (16.10 < 10-3\*)/ (11.82, < 10-3\*)/ (5.73, < 0.02\*)/ (8.94, < 0.004\*) |

Cognitive ability: assessed based on the Montreal cognitive assessment (MoCA) test classification.

a One MoCA value in SPMS group is missing.

**\**P* < 0.05**