Supplementary Material B. Logistic regression models showing the association between medication and cognitive performance following adjustment in four different risk factor categories.

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| **Model 1 - Demographic** | | | | **Model 2 – Seizure diagnosis** | | | | **Model 3 – Seizure related** | | | | **Model 4 – Psychiatric** | | | |
| Variable | | Sig. | Exp (CI) | Variable | | Sig. | Exp (CI) | Variable | | Sig. | Exp (CI) | Variable | | Sig. | Exp (CI) |
| Medication | NoMed | 0.005\* |  | Medication | NoMed | 0.003\* |  | Medication | NoMed | 0.004\* |  | Medication | NoMed | 0.006\* |  |
|  | OtherMed | 0.11 | 2.1 (0.9-5.0) |  | OtherMed | 0.13 | 2.0 (0.8-5.1) |  | OtherMed | 0.10 | 2.1 (0.9-5.3) |  | OtherMed | 0.21 | 1.8 (0.7-4.2) |
|  | Low LEV | 0.81 | 0.9 (0.4-2.2) |  | Low LEV | 0.89 | 0.9 (0.4-2.3) |  | Low LEV | 0.96 | 1.0 (0.4-2.5) |  | Low LEV | 0.70 | 0.8 (0.3-2.0) |
|  | High LEV | **0.008\*** | 4.3 (1.5-12.7) |  | High LEV | **0.01\*** | 4.7 (1.6-13.8) |  | High LEV | **0.004\*** | 4.9 (1.7-14.5) |  | High LEV | **0.008\*** | 4.2 (1.5-12.2) |
| Age | 14-18 | 0.81 |  | Diagnosis | Frontal | 0.08 | 3.1 (0.9-10.8) | Onset | <1 | 0.42 |  | Depression | PHQ9 ≥10 | **0.011\*** | 3.1 (1.3-7.4) |
| (years) | 19-29 | 0.84 | 0.9 (0.4-2.3) |  | R temporal | 0.08 | 2.8 (0.9-9.2) | (years) | >1≤5 | 0.62 | 1.3 (0.5-3.2) | Anxiety | GAD7 ≥10 | 0.35 | 0.7 (0.3-1.6) |
|  | 30-39 | 0.88 | 1.1 (0.4-3.2) |  | L temporal | **0.03\*** | 3.7 (1.1-12.0) |  | >5≤10 | 0.21 | 0.6 (0.3-1.3) |  |  |  |  |
|  | ≥40 | 0.53 | 1.4 (0.5-4.6) |  | Other | 0.19 | 2.5 (0.6-9.9) |  | >10 | 0.82 | 0.9 (0.4-2.1) |  |  |  |  |
| Sex | Female | **0.045\*** | 2.0 (1.0-3.8) |  | PNEE | 0.15 | 3.0 (0.7-13.0) | Frequency⧧ | 0-2 | 0.017\* |  |  |  |  |  |
| Origin | Local | 0.53 | 0.8 (0.4-1.6) |  |  |  |  |  | 3-12 | 0.54 | 1.4 (0.5-3.6) |  |  |  |  |
| CBA | Not active | **0.005\*** | 3.4 (1.5-8.1) |  |  |  |  |  | 13-52 | **0.013\*** | 4.4 (1.4-14.4) |  |  |  |  |
| Education | ≤12yrs | **0.038\*** | 2.1 (1.0-4.3) |  |  |  |  |  | 53+ | **0.017\*** | 4.5 (1.3-15.5) |  |  |  |  |
| Married | Yes | 0.99 | 0.9 (0.5-2.1) |  |  |  |  | Freedom | 0-7 | 0.24 |  |  |  |  |  |
|  |  |  |  |  |  |  |  | (days) | 8-30 | 0.89 | 0.1 (0.3-3.8) |  |  |  |  |
|  |  |  |  |  |  |  |  |  | 31-365 | 0.28 | 0.2 (0.6-7.2) |  |  |  |  |
|  |  |  |  |  |  |  |  |  | >365 | 0.10 | 3.7 (0.8-18.2) |  |  |  |  |
|  |  |  |  |  |  |  |  | LoC | Yes | 0.48 | 1.3 (0.7-2.3) |  |  |  |  |
|  |  |  |  |  |  |  |  | Seize24 | Yes | 0.47 | 1.6 (0.5-5.6) |  |  |  |  |

Note. CBA= community-based activity, LEV=levetiracetam, R=right, L=left, Other=generalized, juvenile myoclonic, occipital, idiopathic, PNEE= psychogenic non-epileptic events, LoC=loss of consciousness, Seize24= seizure in last 24 hours, PHQ=Public Health Questionnaire, GAD=Generalized Anxiety Disorder, Sig.=significance.

⧧Average number of events in the last 12 months. \*Significant at *p*<0.05.