Supplementary Table 1. Associations between elements of cognitive difficulty and modified IDS-SR throughout follow-up.

|  |  |  |
| --- | --- | --- |
| **Cognition domain** |  | **IDS-Total** |
| **Domain** | **Quantile**  | **N (%)** | **B(SE)** | **95% CI** | **p-value** |
| **Subjective cognitive difficulty** |
| PDQ-5 (N = 492) | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 247 (50.2)61 (12.3)90 (18.3)94 (19.1) | -**3.44 (1.31)****3.42 (1.21)****6.25 (1.55)** | **-****0.89, 6.02****1.05, 5.79****3.20, 9.29** | **-****0.009****0.005****<0.001** |
| *Test for trend* |  | 492 (100.0) | **2.04 (0.43)** | **1.18, 2.81** | **<0.001** |
| **Objective cognitive difficulty** |
| THINC-it® Cognitive difficulty composite score (N = 448)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 178 (39.7)49 (10.9)36 (8.0)185 (41.3)448 (100.0) | -4.57 (2.77)**3.39 (3.01****7.51 (1.97)****2.37 (0.65)** | **-**-0.96, 9.99-2.51, 9.29**3.65, 11.37****1.11, 3.64** | **-**0.0990.260**<0.001****<0.001** |
| **Cognition Modules**  |  |  |  |
| Attention (Spotter; N = 434)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 169 (38.9)60 (13.8)40 (9.2)165 (38.0)434 (100.0) | --1.37 (2.44)0.00 (2.63**)****6.81 (1.85)****2.22 (0.62)** | **-**-6.15, 3.40-5.15, 5.16**3.107, 10.44****1.02, 3.43** | **-**0.5730.999**<0.001****<0.001** |
| Working memory(Symbol Check; N = 434)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 149 (34.3)55 (12.7)41 (9.5)189 (43.6)434 (100.0) | **-**1.10 (2.50)0.95 (2.98)**6.65 (2.06)****2.22 (0.67)** | **-**-3.79, 5.99-4.89, 6.78**2.62, 10.68****0.91, 3.54** | **-**0.6590.751**0.001****0.001** |
| Processing Speed(Code Breaker; N = 434)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 162 (37.3)55 (12.7)32 (7.4)185 (42.6)434 (100.0) | -1.17 (2.31)0.82 (3.03)**8.84 (2.10)****2.87 (0.67)** | **-**-3.35, 5.70-5.11, 6.75**5.90, 12.78****1.57, 4.18** | **-**0.6110.786**<0.001****<0.001** |
| Executive Function (Trails; N= 440)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 150 (34.1)76 (17.3)53 (12.1)161 (36.6)440 (100.0) | -3.55 (1.99)3.90 (2.37)**11.22 (1.99)****3.56 (\*0.65)** | **-**-0.35, 7.44**-0.74, 8.54****7.32, 15.12****2.29, 4.83** | **-**0.0740.100**<0.001****<0.001** |

Models adjusted for age, gender, number of years in education, time and RSES self-esteem at the time of outcome measurement. Bold text denotes p-value at level<0.05. N = Number of participants.

Supplementary Table 2. Longitudinal associations between persistent cognitive difficulty and domains of WSAS functional disability.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Domain** |  |  |  |  |  |
|  |  |  | **WSAS – work** | **WSAS -- household** |
|  | **Quantile**  | **N (%)** | **B(SE)** | **95% CI** | **p-value** | **B(SE)** | **95% CI** | **p-value** |
| **Subjective Cognitive Difficulty** |
| PDQ-5 (N = 492)*Test of trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 247 (50.2)61 (12.3)90 (18.3)94 (19.1)492 (100.0) | -**0.67 (0.28)****0.75 (0.26)****0.94 (0.33)****0.36 (0.09)** | **-****0.11, 1.23****0.24, 1.27****0.29, 1.60****0.18, 0.53** | **-****0.019****0.004****0.005****<0.001** | **-****0.57 (0.26)****1.10 (0.24)****0.65 (0.31)****0.36 (0.08)** | **-****0.06, 1.09****0.61, 1.57****0.04, 1.27****0.20, 0.53** | **-****0.029****<0.001****0.038****<0.001** |
| **Objective Cognitive Difficulty** |
| THINC-it® Cognitive difficulty composite score (N = 448)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 178 (39.7)49 (10.9)36 (8.0)185 (41.3)448 (100.0) | -0.61 (0.56)-0.05 (0.61)**1.12 (0.40)****0.34 (0.13)** | **-**-0.49, 1.71-0.25, 1.15**0.34, 1.90****0.09, 0.60** | **-**0.2750.933**0.005****0.009** | -0.62 (0.54)0.07 (0.59)**0.96 (0.39)****0.29 (0.13)** | **-**-0.45, 1.68-1.09, 1.23**0.19, 1.72****0.04, 0.54** | **-**0.2550.906**0.015****0.024** |
| **Cognition Modules**  |  |  |  |  |  |  |
| Attention (Spotter; N = 434)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 169 (38.9)60 (13.8)40 (9.2)165 (38.0)434 (100.0) | **-**-0.43 (0.49)-0.31 (0.54)**0.92 (0.38)****0.30 (0.13)** | **-**-1.40, 0.54-1.36, 0.74**0.18, 1.66****0.05, 0.54** | **-**0.3870.560**0.014****0.018** | --0.35 (0.49)0.00 (0.53)0.64 (0.37)0.22 (0.12) | **-**-1.30, 0.61-1.03, 1.03-0.09, 1.37-0.03, 0.46 | **-**0.4761.0000.0840.079 |
| Working memory(Symbol Check; N= 434)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 149 (34.3)55 (12.7)41 (9.5)189 (43.6)434 (100.0) | -0.07 (0.51)0.36 (0.61)0.81 (0.42)**0.28 (0.14)** | **-****-**0.92, 1.07-0.83, 1.56-0.01, 1.64**0.01, 0.55** | **-**0.8880.5510.053**0.041** | --0.06 (0.49)0.78 (0.59)0.72 (0.41)**0.28 (0.14)** | --1.03, 0.90-0.38, 1.94-0.09, 1.52**0.01, 0.55** | **-**0.8950.1870.080**0.047** |
| Processing Speed(Code Breaker; N = 434)*Test of trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 66 (15.2)48 (11.1)40 (9.2)280 (64.5)434 (100.0) | --0.40 (0.48)0.23 (0.63)**0.90 (0.42)****0.32 (0.14)** | **-**-1.34, 0.53-1.00, 1.46**0.09, 1.72****0.05, 0.59** | **-**0.3980.713**0.030****0.020** | -0.28 (0.47)-0.04 (0.61)**1.05 (0.41)****0.33 (0.13)** | --0.64, 1.19-1.24, 1.16**0.26, 1.85****0.07, 0.60** | -0.5590.943**0.010****0.013** |
| Executive Function (Trails; N = 440)*Test of trend*  | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 150 (34.1)76 (17.3)53 (12.1)161 (36.6)440 (100.0) | -0.46 (0.40)0.74 (0.48)**1.75 (0.40)****0.57 (0.13)** | **-**-0.33, 1.26-0.21, 1.69**0.96, 2.55****0.31, 0.83** | **-**0.2510.126**<0.001****<0.001** | -0.05 (0.40)0.41 (0.48)**1.13 (0.40)****0.38 (0.13)** | **-**-0.73, 0.83-0.52, 1.35**0.36, 1.91****0.13, 0.64** | **-**0.8920.387**0.004****0.003** |

\* Models adjusted for age, gender, number of years in education, time and RSES self-esteem at the time of outcome measurement. Bold text denotes p-value at level <0.05.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Domain** |  |  |  | **WSAS – social leisure** |  | **WSAS – private leisure** |  | **WSAS – relationships** |
|  | **Quantile**  | **N (%)** | **B(SE)** | **95%CI** | **p-value** | **B(SE)** | **95%CI** | **p-value** | **B(SE)** | **95%CI** | **p-value** |
| **Subjective Cognitive Difficulty** |
| PDQ-5 (N = 492)*Test of trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 247 (50.2)61 (12.3)90 (18.3)94 (19.1)492 (100.0) | -**0.66 (0.27)****0.89 (0.25)****1.22 (0.31)****0.43 (0.08)** | **-****0.13, 1.18****0.41, 1.37****0.61, 1.82****0.26, 0.59** | **-****0.015****<0.001****<0.001****<0.001** | -**0.90 (0.28)****0.76 (0.25)****1.17 (0.32)****0.41 (0.08)** | **-****0.35, 1.44****0.26, 1.26****0.54, 1.80****0.24, 0.58** | **-****0.001****0.003****<0.001****<0.001** | -**1.00 (0.29)**0.49 (0.26)**0.69 (0.33)****0.27 (0.09)** | **-****0.44, 1.56**-0.03, 1.00**0.05, 1.34****0.09, 0.45** | **-****<0.001**0.06**0.034****0.003** |
| **Objective Cognitive Difficulty** |
| THINC-it® Cognitive difficulty composite score (N = 448)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 178 (39.7)49 (10.9)36 (8.0)185 (41.3)448 (100.0) | **-**0.41 (0.51)0.67 (0.56)1.20 (0.36)0.39 (0.12) | **-**-0.59, 1.41-0.43, 1.76**0.49, 1.91****0.16, 0.67** | **-**0.4250.233**0.001****0.001** | -0.61 (0.53)0.66 (0.58)**1.16 (0.38)****0.28 (0.12)** | **-**-0.44, 1.65-0.47, 1.80**0.42, 1.90****0.13, 0.62** | **-**0.2540.253**0.002****0.002** | --0.50 (0.53)1.08 (0.58)0.86 (0.37)**0.33 (0.12)** | **-**-1.54, 0.53-0.05, 2.21**0.13, 1.59****0.09, 0.57** | **-**0.3370.062**0.022****0.007** |
| **Cognition Modules**  |  |  |  |  |  |  |  |  |  |
| Attention (Spotter; N = 434)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 169 (38.9)60 (13.8)40 (9.2)165 (38.0)434 (100.0) | --0.29 (0.46)-0.42 (0.50)0.58 (0.35)0.18 (0.12) | **-**-1.20, 0.61-1.40, 0.56-0.11, 1.27-0.05, 0.41 | -0.5220.4000.0980.123 | -0.30 (0.58)1.02 (0.61)**1.03 (0.47)****0.24 (0.12)** | **-**0.29, 0.48-0.17, 0.52**0.81, 0.36****0.01, 0.48** | **-**0.5390.736**0.026****0.042** | --0.03 (0.47)-0.04 (0.52)0.64 (0.36)0.20 (0.12) | --0.96, 0.90-1.04, 0.97-0.07, 1.35-0.03, 0.44 | -0.9510.9440.0780.088 |
| Working memory(Symbol Check; N= 434)*Test for trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 149 (34.3)55 (12.7)41 (9.5)189 (43.6)434 (100.0) | **-**0.43 (0.46)0.62 (0.56)**1.05 (0.38)****0.34 (0.12)** | **-**-0.47, 1.34-0.47, 1.71**0.30, 1.80****0.10, 0.59** | **-**0.3490.268**0.006****0.006** | **-**0.61 (0.48)0.82 (0.58)**1.15 (0.40)****0.37 (0.13)** | **-****-0.33, 1.55****-0.31, 1.95****0.37, 1.93****0.12, 0.62** | **-**0.2030.157**0.004****0.004** | **-**0.54 (0.48)0.71 (0.57)**1.01 (0.40)****0.33 (0.13)** | **-**-0.39, 1.47-0.41, 1.84**0.24, 1.79****0.07, 0.58** | **-**0.2550.213**0.010****0.011** |
| Processing Speed(Code Breaker; N = 434)*Test of trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 66 (15.2)48 (11.1)40 (9.2)280 (64.5)434 (100.0) | -0.22 (0.44)0.34 (0.57)**1.23 (0.38)****0.40 (0.13)** | **-**-0.64, 1.08-0.78, 1.47**0.49, 1.98****0.16, 0.65** | **-**0.6180.552**0.001****0.001** | -0.25 (0.45)-0.41 (0.60)**1.02 (0.39)****0.31 (0.13)** | **-**-0.63, 1.14-1.58, 0.76**0.25, 1.80****0.06, 0.57** | **-**0.5760.493**0.009****0.017** | --0.59 (0.45)0.31 (0.59)**1.02 (0.39)****0.37 (0.13)** | **-****-**1.47, 0.28-0.84, 1.45**0.26, 1.78****0.11, 0.62** | **-**0.1820.601**0.008****0.004** |
| Executive Function (Trails; N = 440)*Test of trend* | 1 (<25%; ref)2 (25-50%)3 (51-75%4 (>75%) | 150 (34.1)76 (17.3)53 (12.1)161 (36.6)440 (100.0) | **-**0.38 (0.36)**0.98 (0.44)****1.66 (0.37)****0.56 (0.12)** | **-**-0.34, 1.09**0.12, 1.83****0.94, 2.38****0.33, 0.79** | **-**0.304**0.025****<0.001****<0.001** | **-**0.71 (0.38)0.49 (0.45)1.77 (0.38)0.55 (0.12) | **-**-0.31, 1.45-0.40, 1.38**1.03, 2.52****0.30, 0.79** | **-**0.0620.284**<0.001****<0.001** | -0.26 (0.37)0.63 (0.44)**1.76 (0.37)****0.58 (0.12)** | **-**-0.47, 1.00-0.24, 1.50**1.03, 2.50****0.34, 0.82** | **-**0.4870.157**<0.001****<0.001** |

Models adjusted for age, gender, number of years in education, time and RSES self-esteem at the time of outcome measurement. Bold text denotes p-value at level<0.05. N = Number of participants.