**Supplemental Table 4. Summary of findings in cognition. Studies are grouped according to cognitive function. Most studies only present composite z-scores for certain domains, we present the tests contained in these domains in the column “Test”. Sample age at the first measurement point is reported if not stated otherwise. Progression is coded as follows: ↑ - improvement, ↓ - decline, = - stable. Total sample size is given when studies are mentioned for the first time, not taking into account that the number of participants that has completed a given test may vary slightly. Abbreviations: CPT – Continuous-Performance Test, CVLT - California Verbal Learning Test, HRNB - Halstead-Reitan Neuropsychological Battery, LNNB - Luria Nebraska Neuropsychological Battery, MAE – Multilingual Aphasia Examination, MMSE - Mini-mental state examination, TMT- Trail-Making-Test, WAIS - Wechsler Adult Intelligence Scale [-R-revised version, -III - 3rd edition], WCST - Wisconsin Card Sorting Test, WMS - Wechsler Memory Scale [-R-revised version], WRAT-R – Wide Range Achievement Test Revised Version.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reference | Test | # SZ/CON | % Male, SZ/CON | Mean age (SD), SZ/CON | Follow-up duration | SZ sample characteristics | Progression | Comment |
| *Executive Function* | | | | | | | | |
| Albus et al. (2002)25 | Color-Word Interference Test, TMT-B, Digit-Symbol-Test (WAIS) | 50/50 | 52/46 | 29.0 (9.3)/31.6 (9.6) | 2 years | First-episode | = | Domain “Visual-Motor Processing and Attention” |
| Albus et al. (2002)25 | WCST |  |  |  |  |  | = | Domain “Abstraction and Conceptual Flexibility” |
| Burdick et al. (2006)27 | Verbal Fluency | 16/16a | ?/? | 37.6 (4.9)/38.1 (5.7)a | About 5 years | Chronic | ↓ |  |
| Burdick et al. (2006)27 | TMT-B |  |  |  |  |  | = |  |
| Burdick et al. (2006)27 | WCST |  |  |  |  |  | = |  |
| Cobia et al. (2012)12 | Digit Span and Spatial Span (forward and backward), Letter-Number-Sequencing (all WAIS-III), CPT | 20/20 | 50/55 | 30.1 (11.1)/ 30.4 (12.8) | On average 2 years | ?, probably first-episode and chronic | = | Domain “Executive Function” |
| Cobia et al. (2012)12 | TMT-B, Verbal Fluency, Matrix Reasoning subtest (WAIS-III) WCST |  |  |  |  |  | = | Domain “Working Memory” |
| Gur et al. (1998)8 | WCST | 20/20/17b | 55/60/76b | 27.8 (8.2)/30.6  (7.7)/31.9 (8.9)b | 15-68 months | First-episode and chronic | ↓ | Domain “Abstraction-Mental Flexibility” |
| Gur et al. (1998)8 | Stroop Color and Word Test, Digit-Span and Digit-Symbol (WAIS-R), TMT |  |  |  |  |  | ↓ | Domain “Attention” |
| Rund et al. (1989)22 | Digit-Span with distractor items | 14/8/20c | 88/13/60c | 24.3 (3.8)/23.9 (2.2)/22.2 (4.0)c | 4 years | Young, early in disease | ↓/= | Decline in paranoid but not in non-paranoid SZ group |
| Wang et al. (2008)10 | Digit Span and Spatial Span (both forward and backward), Letter-Number-Sequencing (all WAIS-III), CPT | 56/62 | 66/55 | 36.6 (12.9)/36.2(14.5) | 0.8-5.3 years | Adult patients, large age-range | ↓ | Domain “Working Memory”, improvement in control group |
| Wang et al. (2008)10 | TMT-B, Verbal Fluency, Matrix Reasoning subtest (WAIS-III) |  |  |  |  |  | = | Domain “Executive Function” |
| *Verbal Learning* | | | | | | | | |
| Albus et al. (2002)25 | CVLT, WMS-R Paired Associate Learning Test |  |  |  |  |  | ↑ |  |
| Burdick et al. (2006)27 | CVLT Trial 1 and Trails 1-5 |  |  |  |  |  | = |  |
| *Visual Memory* | | | | | | | | |
| Albus et al. (2002)25 | WMS-R Visual Reproducibility Subtest |  |  |  |  |  | ↓ | Improvement in control group |
| Gur et al. (1998)8 | WMS Design Reproduction, Immediate and 30min. Delay) |  |  |  |  |  | = | Visuo-spatial memory |
| *Verbal Memory* | | | | | | | | |
| Albus et al. (2002)25 | WMS-R Logical Memory (immediate and delayed recall) |  |  |  |  |  | = | Semantic memory |
| Burdick et al. (2006)27 | CVLT List A Short Delay |  |  |  |  |  | ↓ | Improvement in control group (bipolar) |
| Burdick et al. (2006)27 | CVLT List A Long Delay |  |  |  |  |  | ↓ | Improvement in control group (bipolar) |
| Gur et al. (1998)8 | WMS (Logical Memory, Immediate and 30 min delay), CVLT (sum Trials 1-5) |  |  |  |  |  | ↓ |  |
| *Episodic Memory* | | | | | | | | |
| Cobia et al. (2012)12 | Immediate recall of family pictures and logical memory (WMS-III) |  |  |  |  |  | = |  |
| Wang et al. (2008)10 | Immediate recall of family pictures and logical memory (WMS-III) |  |  |  |  |  | = |  |
| *Language* | | | | | | | | |
| Gur et al. (1998)8 | Controlled Oral Word Association (MAE),  Animal Naming and Boston Naming Test (BDAE), Token Test (MAE), WRAT-R (Reading) |  |  |  |  |  | = |  |
| *Processing Speed* | | | | | | | | |
| Bonner-Jackson et al. (2010)28 | Digit-symbol test (WAIS) | 84/63/97d | 62/48/37d | 22.8 (?)/23.1(?)/23.2 (?)d | 20 years, multiple follow-upsd | Young | = | Improvement after acute phase in all psychatric patients |
| Burdick et al. (2006)27 | TMT-A |  |  |  |  |  | = |  |
|  |  |  |  |  |  |  |  |  |
| *Knowledge/Crystallized IQ* | | | | | | | | |
| Bonner-Jackson et al. (2010)28 | Information subtest (WAIS) |  |  |  |  |  | ↑/= | Access to General Knowledge,improvement in SZ group after acute phase, stable thereafter |
| Cobia et al. (2012)12 | Vocabulary subtest (WAIS-III) |  |  |  |  |  | = | Crystallized IQ |
| Wang et al. (2008)10 | Vocabulary subtest (WAIS-III) |  |  |  |  |  | = | Crystallized IQ |
| *Global Cognitive Tests* | | | | | | | | |
| Brodaty et al. (2003)26 | MMSE | 19/24e | 21/21e | 75.2 (7.9)/70.7 (6.8)e | 5 yearse | Late-onset | ↓ |  |
| Friedman et al. (2001)23 | MMSE | 107/136 | ?/?f | ? (?)/? (?) | About 6 years | Different age groups; control subjects only for elderly participants | ↓ | Only considering older age groups (for which a control group was present) |
| Heaton et al. (2001)24 | HRNB | 142/206 | 70/64 | 47.6 (15.7)/51.7 (20.1) | 6 months to 10 years | Different age groups | = |  |
| Nakamura et al. (2007)38 | MMSE | 17/21/26g | 82/81/85g | 24.7 (7.0)/22.4 (3.2)/23.6 (4.1)g | On average 1.5 years | First-episode | ? (=) | statistical comparison; numerical values suggest stability |
| *Perception* |  |  |  |  |  |  |  |  |
| Gur et al. (1998)8 | Block Design (WAIS-R), Benton Line Orientation, Geometric Figure Drawings |  |  |  |  |  | = | Visual-spatial perception |
| *Sensory/Motor* |  |  |  |  |  |  |  |  |
| Gur et al. (1998)8 | Double Sensory Simultaneous Stimulation and Graphestesis and Finger Tapping (HRNB), Thumb-Finger Sequential Touch (LNNB) |  |  |  |  |  | = |  |

a two groups of subjects were assessed: SZ and bipolar patients. The latter group is referred to as the control group.

b both first-episode and chronic patients were investigated as well as healthy controls. Statistics are reported in this order.

c the study investigated SZ patients, psychiatric controls and healthy controls. Data are reported in this order. Both paranoid and non-paranoid SZ patients groups were combined into a single SZ group.

d examined three patient groups were examined: SZ, other psychotic disorders, and depressive subjects. The total of 244 patients were followed six times over the 20 year interval, 92% completed 5 or 6 follow-ups. Data are reported in the following order: SZ group/other psychotic group,/non-psychotic depression group.

e there were two follow-ups, after 1 year and after 5 years. Data reported refer to the group of subjects that completed the 5 year follow-up.

f the study investigated schizophrenics (age range 20-80 years), healthy controls (age range 50-80) and a patients suffering from Alzheimer's disease (data not shown).

g the study investigated SZ patients, psychiatric controls (affective psychosis patients) and healthy controls. Data are reported in this order.