**sTable 1. Longitudinal studies of neuropsychological functioning in first episode psychosis.** Included are studies with or without a comparison groups with a follow-up durations of at least one year.

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| --- | --- | --- | --- |
| Study | N (Subjects) | Length of follow-up | Summary of findings |
| Scottish Schizophrenia Research Group (1988)(1) | 28 FE patients  | 1 year | **Improvement** on Raven’s Progressive Matrices, Block Design and Digit copying; **No change** on Vocabulary and Similarities  |
| Hoff et al. (1991)(2)  | 15 FE patients | 2 years | **Improvement** on Executive, Concentration/Speed and Global scales |
| Bilder et al. (1991)(3) | 28 FE patients | 1 year | High **stability** of test scores overall; **Improvement** on tests of attentional, motor, and memory functions; **Decline** on Digit Span |
| Sweeney et al. (1991)(4) | 15 FE patients | 1 year | **Improvement** on psychomotor (Trails A and B, Digit Symbol and Finger Tapping), Judgment of Line Orientation and Rey AVLT tests. **No change** on Digit Span, Block Design, verbal fluency, verbal learning/recall and immediate/delayed visual memory. |
| Nopoulos et al. (1994)(5) | 35 FE patients | 1 (n=17)/2 (n=18) years | **No change** on most neuropsychological scores; **Improvement** on Trails B, Stroop Colored Dots and Stroop Interference. |
| Censits et al. (1997)(6) | 30 FE patients  | 19 months | **Stable** performance on all neuropsychological tests. |
| Hoff et al. (1999)(7) | 42 FE patients 16 healthy controls | 3.6 years (FE), 3.8 (HC) | Patients showed **no improvement** on verbal memory and sensory-perceptual domains compared to controls and showed **deterioration** in verbal memory. |
| Gold et al. (1999)(8) | 21 FE patients33 recent onset patients | 5 years | **Improvement** on performance IQ, full-scale IQ, letter-cancellation, logical memory free recall, WCST categories; **Decline** in finger tapping. |
| Hofer et al. (2000)(9) | 16 FE patients  | 1 year | **Normalization** of neuropsychological performance over time. |
| Purdon et al. (2000)(10) | 55 FE patients | 1 year | **Improvement** or **stability** on all neuropsychological tests.  |
| Albus et al. (2002)(11) | 50 FE patients50 healthy controls | 2 years | **Improvement** in verbal learning; **No change** in semantic memory, visual-motor processing and attention, and abstraction/flexibility; **Deterioration** in visual memory. |
| Townsend et al. (2002)(12) | 83 FE patients | 1 year | **Improvement** onverbal and performance IQ, measures of verbal comprehension, perceptual organization, working memory, visual memory, auditory memory, WCST, Trails-A, CPT, word fluency; **No change** on Stroop and Trails-B. |
| Stirling et al. (2003)(13) | 24 FE patients | 10.6 years | **Decline** in performance on three out of nine tests: object assembly, picture completion, and memory for design. **Stable** performance on measures of executive/frontal function. |
| Hill et al. (2004)(14) | 45 FE patients33 healthy controls | 1-2 years | **No change** in executive functions, motor skills; **Less improvement** than controls in attention and verbal memory; **Improvement** in visual memory and visual perception compared to controls.  |
| Hoff et al. (2005)(15) | 21 FE patients8 healthy controls | 10 years | **High stability** on most neuropsychological tests; **Improvement** inVerbal IQ, Stroop Color Word and Finger Tapping in both patients and controls; **Greater improvement** in patients compared to controls in Visual Reproduction-Immediate. |

**sTable 1. Cont.**

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| --- | --- | --- | --- |
| Study | N (Subjects) | Length of follow-up | Summary of findings |
| Addington et al. (2005)(16) | 105 FE patients66 healthy controls | Patients: 1,2 and 3 years HC: 1 year | **Improvement** in patients over three years in several tests, but **failure to improve** during the first year on verbal fluency, visual memory, trails A and the Stroop, compared to controls who did improve. Controls failed to improve on the RAVLT, letter-number, WCST and Pegboard-dominant. |
| Albus et al. (2006)(17) | 71 FE patients71 healthy controls | 5 years | Both groups showed **stability** or **improvement** in the majority of cognitive domains. Patients showed **deterioration** in verbal fluency while controls improved, as well as a trend towards **less improvement** in semantic memory and retention rate compared to controls.  |
| Keefe et al. (2006)(18) | 58 and 26 FE patients  | 1 and 2 years | **Improvement** in attention, processing speed, verbal memory and working memory. |
| Kopala et al. (2006)(19) | 20 FE patients | 2 years | **Improvement** on measures of verbal learning, verbal fluency, attention, and executive function. |
| Keefe et al. (2007)(20) | 81 FE patients | 1 year | **Improvement** across neuropsychological tests. |
| Rund et al. (2007)(21) | 138 FE patients (1 year)111 FE patients (2 years) | 1 and 2 years | **Improvement** in working memory and verbal learning dimensions.  |
| Rodriguez-Sanchez et al. (2008)(22) | 112 FE patients 22 healthy controls | 1 year | Equivalent **improvement** in patients and controls in all cognitive domains, except verbal memory where controls showed greater improvement than controls. |
| Mayoral et al. (2008)(23) | 22 FE patients29 healthy controls | 2 years | Patients and controls showed **improvement** in global cognitive performance and attention, and **no change** in working memory. Patients, but not controls showed **improvement** in learning and memory, and **no change** in executive function. Controls, but not patients, showed **improvement** in executive function, and **no change** in learning and memory. |
| Zipparo et al. (2008)(24) | 32 FE patients | 2-3 years | **Stability** on the majority of cognitive tests; **Improvement** in full-scale and performance IQ, and visual memory; A trend towards **decline** in verbal knowledge, attention and visuospatial ability. |
| Crespo-Facorro et al. (2009)(25) | 104 FE patients37 healthy controls | 1 year | Patients, but not controls, showed **improvement** on measures of motor speed, executive function and long-term recall; Similar **improvement** in patients and controls on all other cognitive measures.  |
| Leeson et al. (2009)(26) | 104 FE patients 25 healthy controls | 1 and 3 years | Patients showed **deterioration** in attentional set shifting task performance from baseline to 1 year, but no difference between baseline and 3 or 6 years; Controls showed **no change** over time. |
| 31 FE patients  | 6 years |
| de Mello Ayres et al. (2010)(27) | 56 FE patients70 healthy controls | 1.6 years (patients), 1.9 years (controls) | Similar **improvement** on digit span forward, digit span backward, and verbal fluency in patients and controls. |

**sTable 1. Cont.**

|  |  |  |  |
| --- | --- | --- | --- |
| Study | N (Subjects) | Length of follow-up | Summary of findings |
| Popolo et al. (2010)(28) | 15 FE patients | 1 year | **No significant change** over time.  |
| Leeson et al. (2011)(29) | 78 FE patients27 healthy controls | 1 year | Patients with normal IQ at baseline showed similar IQ **improvement** as controls; patients with low IQ at baseline showed **less** **improvement** than other patients and controls; All patients showed similar **improvement** in memory and executive function as controls. |
| 60 FE patients 27 healthy controls | 3 years |
| Liu et al. (2011)(30) | 31 FE patients | 1 and 3 years | **Stability** and **improvement** on measures of executive function. |
| Barder et al. (2012)(31)  | 62 FE patients | 1, 2 and 5 years | **Improvement** in working memory and impulsivity in the first two years, followed by **no change** over the next three years; **Decrease** in motor speed from 2 to 5 years; **No change** in verbal learning and executive function. |
| Ayesa-Arriola et al. (2013)(32) | 79 FE patients41 healthy controls | 3 years | Patients and controls showed **improvement** in most cognitive scores; Less improvement in patients compared to controls on measures of verbal memory and processing speed. |
| Rodríguez-Sánchez et al. (2013)(33) | 155 FE patients43 healthy controls | 3 years | **Increasing deviation** of patients from controls in measures of verbal and visual memory; **Similar improvement** in patients and controls on measures of motor dexterity and attention. |
| Chang et al. (2014)(34) | 93 FE patients | 1, 2 and 3 years | **Improvement** in measures of working memory, logical memory, visual reproduction and WCST; **No change** in category fluency. |
| Rund et al. (2015)(35) | 167 FE patients (1 year)159 FE patients (2 years)101 FE patients (5 years)114 FE patients (10 years) | 1, 2, 5 and 10 years | **Stability** in composite score of neurocognitive function over time. |
| Amoretti et al. (2016)(36) | 45 FE patients41 healthy controls | 2 years | **Improvement** in verbal memory and attention;measures of working memory and executive function remained **stable.** |
| Bergh et al. (2016)(37) | 171 FE patients | 5 and 10 years | Performance on cognitive tests(of executive function) **did not change** significantly over time. |
| Kenney et al. (2016)(38) | 23 FE patients21 healthy controls | 4 years | Patients showed **less improvement** than controls on measures of processing speed and verbal learning; there were **no group difference in change** on the remaining cognitive metrics. |
| Labad et al. (2016)(39) | 36 FE patients | 1 year | Performance on cognitive tests(of processing speed, attention, working memory, verbal/visual learning and reasoning) **did not change** significantly over time. |

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