Supplementary Table 1.Comparison of longitudinal studies with long observation periods, at least three testing visits, and which administered comprehensive neuropsychological test batteries. Obs = Observation Period, TRI = Test-Retest Interval, Age at Baseline and Timepoints noted in Years Preceding Diagnosis. Red Boldface Type Refers to Significant Differences.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Study | N | Obs. (y) | TRI (y) | Age (y) | Timepoint of emergence of neuropsychological impairment in years preceding diagnosis |
|  | NC | AD |  |  |  | -12 | -11 | -10 | -9 | -8 | -7 | -6 | -5 | -4 | -3 | -2 | -1 |
| **Baltimore Longitudinal Study of Aging** |
| Grober et al., 2008 [1] | 822 | 92 | 15 | 2 | 79.8 ± 6.9\*\* (AD patients at baseline) |  |  |  |  |  | **VEM**EFSFluPFlueVIQ | **VEM**EFSFluPFlueVIQ | **VEM**EFSFluPFlueVIQ | **VEM**EFSFluPFlueVIQ | **VEM****EFSFluPFlu**eVIQ | **VEM****EFSFluPFlu**eVIQ | **VEM****EFSFluPFlu**eVIQ |
| **Bronx Aging Study** |
| Masur et al., 1994 [2] | 253 | 64 | >4 | 1 | 78.9 ± 3.0\*\* |  |  |  |  |  |  |  |  |  | VEMNVEMWMAbReasSFluVisSpatV-MSLang | **VEMNVEM****WM**AbReas**SFlu**VisSpatV-MSLang | VEMNVEMWMAbReasSFluVisSpatV-MSLang |
| Hall et al., 2001 [3] | 0 | 75 | 19 | 1 | range: 75-85 | VEMPIQ | VEMPIQ | VEMPIQ | VEMPIQ | VEMPIQ | **VEM**PIQ | **VEM**PIQ | **VEM**PIQ | **VEM**PIQ | **VEM**PIQ | **VEMPIQ** | **VEMPIQ** |
| Tierny et al., 2005 [4] | 10y: 216 5y: 474 | 10y: 475y: 77 | 10 | 5 | 10y: 75.2 ± 5.7\*\* 5y: 80.0 ± 6.2\*\* |  |  | **VEM**WMAbReasSFluPFluInfoVisSpatAttnV-MSLang |  |  |  |  | **VEM**WMAbReas**SFlu**PFlu**Info**VisSpatAttnV-MSLang |  |  |  |  |
| Saxton et al., 2004 [5] | 621 | 72 | 8 | 1 | 73.7 ± 4.3\*\* |  |  |  |  |  | **VEM****NVEM**EFSFluPFluInfoVisSpatAttnV-MSLang |  |  | **VEMNVEM****EF****SFlu**PFluInfoVisSpatAttnV-MSLang |  | **VEMNVEMEF****SFlu**PFluInfoVisSpat**Attn**V-MS**Lang** |  |
| Elias et al., 2000 [6] | 937 | 109 | 22 | 2 | 72.5 ± 5.7\*\* |  |  | **VEM**NVEMWM**AbReas**PFlu |  |  |  |  | **VEM****NVEM**WM**AbReas**PFlu |  |  |  |  |
| Small et al., 1997a [7] | 179 | 26 | 3 | 3 | 83.5 ± 4.7\*\* |  |  |  |  |  |  |  |  |  | **VEM****NVEM**WMSFlu**PFlu**VisSpatMMSE |  |  |
| Bäckman et al., 2001 [8] | 105 | 15 | 6 | 3 | 82.2 ± 4.71\*\* |  |  |  |  |  |  | **VEM**WM |  |  | **VEM**WM |  |  |
| Chen et al., 2000 [9] | 483 | 120 | 10 | 2 | 75.6 ± 4.6\*\* |  |  |  |  |  |  |  |  |  |  | **VEM****EF**SFluPFluLangPraxMMSE |  |
| Chen et al., 2001 [10] | 483 | 68 | 10 | 2 | 73.1 ± 4.5\*\* |  |  |  |  |  |  |  |  | **VEM****EF**SFluPFluLangPraxMMSE |  | **VEM****EF**SFluPFluLangPraxMMSE |  |
| Jacobs et al., 1995 [11] | 402 | 41 | 4 | 1 | 73.3 ± 6.8\*\* |  |  |  |  |  |  |  |  |  |  | **VEM**NVEM**AbReas**SFluPFluVisSpat**Lang**MMSE |  |
| Fabrigoule et al., 1998 [12] | 1134 | 16 | 5 | 2 | not reported (ca. 73 y) |  |  |  |  |  |  |  |  |  |  | **VEMNVEMAbReasSFluV-MSMMSE** |  |
| Amieva et al., 2005 [13] | 1050 | 215 | 10 | 2 | not reported (ca. 73 y) |  |  |  | **NVEMAbReasSFluMMSE** |  |  |  |  |  |  |  |  |
| Amieva et al., 2008 [14] | 350 | 350 | 15 | 2.3 | not reported (ca. 73 y) | NVEMAbReas**SFlu**MMSEIADLDepCogCom |  | NVEM**AbReas****SFlu**MMSEIADLDepCogCom | **NVEM****AbReas****SFlu****MMSE**IADLDepCogCom | **NVEM****AbReas****SFlu****MMSE**IADL**Dep****CogCom** |  | **NVEM****AbReas****SFlu****MMSE****IADL****Dep****CogCom** |  |  |  |  |  |

\*\* mean ± SD not reported, calculated from text; VEM =Verbal episodic memory; NVEM = Nonverbal episodic memory; WM = Working Memory; EF = Executive functioning (Trail Making Test B); AbReas = Abstract Reasoning; SFlu = Semantic fluency; PFlu = Phonemic fluency; VisSpat = Visuo-spatial ability; V-MS = Visuo-motor speed; Attn = Attention; Info = Information subtest of the WAIS; Lang = Language; eVIQ = Estimated verbal intelligence; Prax = Praxis; PIQ = Performance IQ; MMSE = Mini-Mental State Examination; ADL/IADL; Activities of daily living / Instrumental activities of daily living; A/M/Dep = Affect/Mood/Depression; CogCom = Cognitive Complaints.

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