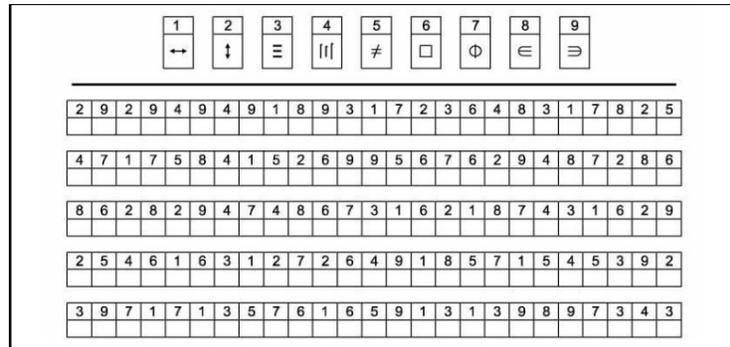


Clinical and Demographic Data on DSST

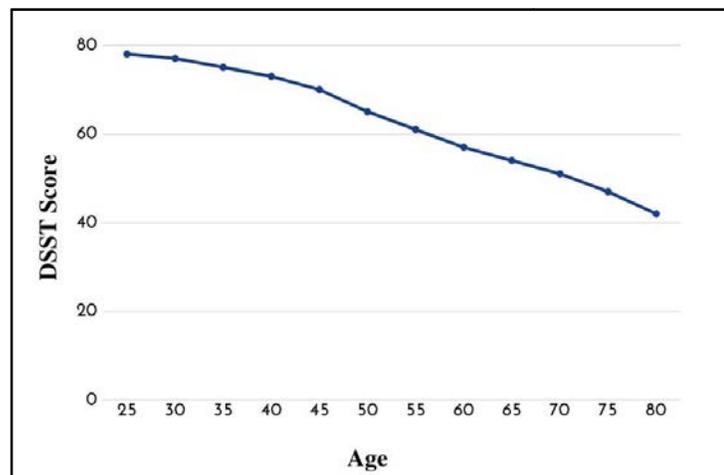
The Digit Symbol Substitution Test (DSST) is a neuropsychological measure that evaluates processing speed and is sensitive to cognitive deficit.



Slower processing speeds as detected by the DSST may serve as a type of biomarker for disorders of cognition, mobility, and possibly even mood. Use of the DSST for studying the pathophysiology of psychomotor slowing with age may also provide insights into the pathology of age-related brain disorders.¹

Normative Data

Age (years)	DSST (points)
25-29	78.0 ± 15.5
30-34	77.0 ± 16.0
35-44	75.0 ± 16.5
45-54	70.0 ± 15.2
55-64	61.0 ± 15.0
65-69	54.0 ± 15.0
70-74	51.0 ± 14.7
75-79	47.0 ± 14.5
80-84	42.0 ± 15.0



Adapted from Cherry et al (2009).²

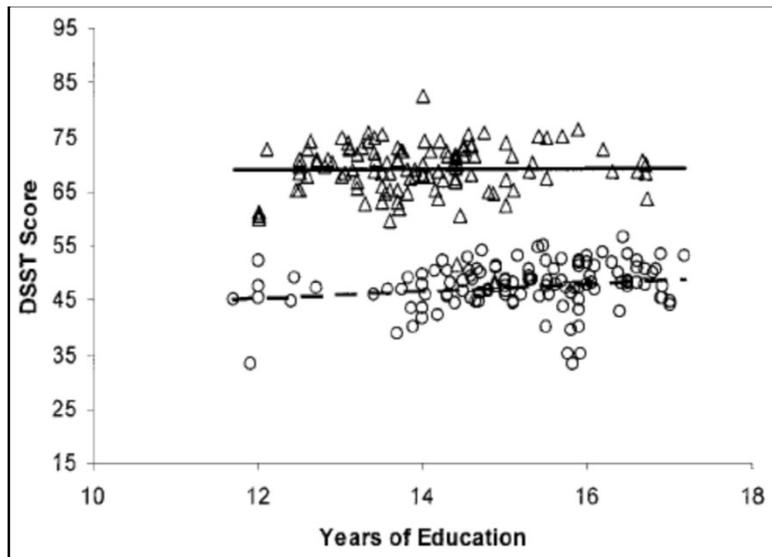
Clinical Data

Baseline characteristics in 1992-93 for participants in the Cardiovascular Health study, stratified by presence of disorders in mobility (gait speed, GS) and mood (Center for Epidemiological Studies - Depression, CES-D).³

	All cohort	Mobility disorders (GS, m/sec)				Mood disorders (CES-D, points)			
		None (>1.0)	Subclinical (0.6-1.0)	Clinical (<0.6)	Missing GS	None (<5)	Subclinical (5-10)	Clinical (≥ 11)	Missing CES-D
Number	5888	1423	3164	644	657	2146	1761	783	1198
DSST, points	38.1 ± 13.9	43.8 ± 12.6	37.5 ± 13.5	28.2 ± 12.8	30.7 ± 14.1	39.9 ± 13.4	36.7 ± 14.1	33.8 ± 14.3	40.4 ± 13.1

Adapted from Rosano et al (2016).

Demographic Data



Digit symbol scores as a function of number of years of education. Triangles indicate younger adults, and circles indicate older adults. The solid line indicates the regression line for younger adults, and the broken line indicates the regression line for older adults.⁴

Effect Size on DSST Performance

Vortioxetine 20 mg (McIntyre et al 2014)^a

Vortioxetine 10 mg (McIntyre et al 2014)^a

Vortioxetine 10-20 mg (Mahableshwarkar et al 2015)^b

Vortioxetine 5 mg (Elderly) (Katona et al 2012)^c

Duloxetine 60 mg (Mahableshwarkar et al 2015)^b

Duloxetine 60 mg (Elderly) (Katona et al 2012)^c

Acute caffeine (50 mg) at 30 min (Kassis et al 2013)^e

Acute caffeine (50 mg) at 120 min (Kassis et al 2013)^e

Caffeine deprivation (Phillips-Bute and Lane 1997)^d

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3. Rosano, Caterina, Subashan Perera, Marco Inzitari, Anne B. Newman, William T. Longstreth, and Stephanie Studenski. "Digit Symbol Substitution Test and Future Clinical and Subclinical Disorders of Cognition, Mobility and Mood in Older Adults." *Age and Ageing*. September 2016. Accessed June 24, 2019. <https://www.ncbi.nlm.nih.gov/pubmed/27496932>.
4. Hoyer, William J., Robert S. Stawski, Christina Wasylyshyn, and Paul Verhaeghen. "Adult Age and Digit Symbol Substitution Performance: A Meta-analysis." *Psychology and Aging*. March 2004. Accessed June 24, 2019. <https://www.ncbi.nlm.nih.gov/pubmed/15065945>.