

Differences in the Attention and EF Domain on the NEPSY and NEPSY-II

Jaime L. Goldstein, B.A., Pamela E. Cioffi, B.A., Daniel C. Miller, Ph.D., ABPP, ABSNP, & Denise E. Maricle, Ph.D.  
Texas Woman’s University, Denton, Texas

These data were drawn from an archival sample of 697 mixed clinical case studies that were submitted by students in the Kids, Inc. School Neuropsychology Post-Graduate Certification Program (2001 – 2010).

Abstract

The NEPSY-II is an integrated battery of tests designed to assess neuropsychological functioning in children three to sixteen years of age (Korkman, Kirk, & Kemp, 2007). The NEPSY-II was revised from the NEPSY (Korkman, Kirk, & Kemp, 1998) to increase its clinical utility and to extend the age range upward to 16. Several changes were made during this revision to the various domains, including the Attention and Executive Functioning (EF) domain. From that domain, three subtests were removed (Knock and Tap, Tower, and Visual Attention), three were added (Animal Sorting, Clocks, and Inhibition), two were retained with modifications (Auditory Attention and Response Set and Statue), and one was not altered (Design Fluency). The subcomponents of the Attention and EF domain remained the same (inhibition; monitoring and self-regulation; vigilance; selective and sustained attention; the capacity to establish, maintain, and change a response set; nonverbal problem solving; and figural fluency) with the addition of planning and organizing a complex response.

Using a combined sample of NEPSY/NEPSY-II scores, differences in the Attention and EF domain were examined. A correlation matrix was computed for a mixed clinical sample of children eight to twelve. Findings were then compared to a correlation matrix that was derived from a mixed clinical sample of children eight to twelve (Averitt, 2011). This study will provide insight into the psychometric properties and clinical utility of the Attention and EF domain of the NEPSY and NEPSY-II in a broader sample.

Correlation Matrix of Attention and EF Subtests on the NEPSY and NEPSY-II

	Animal Sorting	Auditory Attention	Clocks	Design Fluency	Response Set	Tower
Auditory Attention	-.037					
	-----					
Clocks	.272**	.084*				
	-----	-----				
Design Fluency	.193**	.099**	.134**			
	-----	-----	-----			
Response Set	.027	.255**	.172**	.132**		
	-----	.539**	-----	-----		
Tower	-.067*	.152**	.004	.038	.071*	
	-----	.189**	-----	-----	.176**	
Visual Attention	-.129**	.072*	-.052	-.134**	.019	.236**
	-----	.083	-----	-----	.270**	.174**

=NEPSY/NEPSY-II

=NEPSY (Averitt, 2011)

\* p < .05,    \*\* p < .01

Frequencies and Percentages for Diagnostic Classification of the Samples									
	NEPSY/NEPSY-II		NEPSY			NEPSY/NEPSY-II		NEPSY	
	N	%	N	%		N	%	N	%
Learning Disability (LD)	183	26.3	75	24.0	Deaf	5	0.7	1	0.3
Language Disability	18	2.7	11	3.5	Other (Multiple Disabilities)	50	7.2	48	15.4
Mental Retardation	9	1.3	2	0.6	LD/ADHD	84	12	0	0
Neurological Impairment (Acquired)	76	10.9	33	10.6	Neurological Impairment/ADHD	9	1.3	0	0
ADD/ADHD	115	16.5	44	14.1	ASD/ADHD	6	0.9	0	0
Autism Spectrum Disorder (ASD)	46	6.6	15	4.8	ED/ADHD	29	4.2	0	0
Emotional Disturbance (ED)	31	4.4	8	2.6	General Medical/ADHD	7	1	0	0
General Medical	29	4.2	7	2.2	Not Reported	0	0	68	21.8

Implications

- Overall, correlations between attention and EF tasks on the NEPSY and NEPSY-II are low in a mixed clinical sample.
- Although the authors intended to improve EF tasks on the NEPSY-II, the intercorrelations among subtests are still low.
- The decision to not include Tower and Visual Attention on the NEPSY-II appears warranted; however, the inclusion of Clocks and Animal Sorting did not appear to improve intercorrelations between EF tasks.
- Future research could look at the intercorrelations between attention and EF tasks on the NEPSY-II in isolation

References

Avirett, E. K. (2011). *Validity of executive functioning tasks across the WJ III COG, NEPSY, and D-KEFS in a clinical population of children: Applicability to three neurocognitive theories*. (Unpublished doctoral dissertation). Texas Woman’s University. Denton, TX.

Korkman, M., Kirk, U., & Kemp, S. (1998). NEPSY: A Developmental Neuropsychological Assessment manual San Antonio, TX: The Psychological Corporation.

Korkman, M., Kirk, U., & Kemp, S. (2007). NEPSY II: A Developmental Neuropsychological Assessment (2<sup>nd</sup> Ed.) clinical and interpretative manual. San Antonio, TX: The Psychological Corporation.