

Supplemental Tables

Investigating the Theoretical Structure of the Differential Ability Scales—Second Edition Through Hierarchical Exploratory

Factor Analysis

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Table A1

Differential Ability Scales, Second Edition (DAS-II) Exploratory Factor Analysis: Three Oblique Factor Solution for the Standardization Sample 5 to 8 Year Olds (N = 787)

DAS-II Subtest	<i>g</i>	F1:	F2:	F3:	<i>h</i> ²
Recall of Design (Gv)	.70	.82 (.76)	-.01 (.53)	.03 (.33)	.579
Copy (Gv)	.63	.80 (.70)	-.15 (.47)	.03 (.30)	.501
Matching Letter Like Form (Gv)	.63	.64 (.66)	.02 (.51)	.10 (.29)	.439
Pattern Construction-Alternative (Gv)	.73	.63 (.75)	.21 (.64)	-.11 (.26)	.583
Early Number Concepts (Gc/Gf)	.69	.57 (.70)	.20 (.60)	-.04 (.28)	.499
Recognition of Pictures (Gv)	.57	.53 (.58)	.00 (.46)	.12 (.35)	.350
Sequential and Quantitative Reasoning (Gf)	.75	.51 (.73)	.38 (.70)	-.16 (.22)	.604
Rapid Naming (Gs)	.49	.47 (.50)	-.03 (.38)	.12 (.31)	.264
Speed of Information Processing (Gs)	.43	.44 (.45)	.05 (.33)	.10 (.27)	.210
Digit Backwards (Gsm)	.69	.44 (.67)	.28 (.63)	.04 (.35)	.482
Picture Similarities (Gf)	.54	.33 (.52)	.27 (.50)	-.03 (.23)	.300
Word Definitions (Gc)	.64	-.23 (.47)	.90 (.75)	.05 (.35)	.584
Verbal Similarities (Gc)	.70	-.02 (-.57)	.77 (.76)	.02 (.35)	.583
Naming Vocabulary (Gc)	.65	-.02 (.53)	.72 (.71)	.02 (.33)	.508
Verbal Comprehension (Gc)	.65	.14 (.57)	.58 (.68)	-.01 (.30)	.465
Recall of Sequential Order (Gwm)	.73	.25 (.65)	.47 (.71)	.11 (.42)	.539
Digit Forward (Gsm)	.62	.21 (.55)	.43 (.61)	.05 (.33)	.392
Matrices (Gf)	.65	.32 (.61)	.38 (.62)	-.04 (.27)	.428
Recall of Object Delayed (Glr)	.47	.06 (.38)	-.02 (.39)	.78 (.80)	.643
Recall of Object Immediate (Glr)	.55	.05 (.44)	.10 (.47)	.76 (.82)	.685
Eigenvalue		8.47	1.31	1.23	
% Variance		42.4	6.5	6.1	
Factor Correlations					
Verbal Comprehension		1.000			
Visual Spatial		.754	1.000	.444	
Working Memory		.422	.444	1.000	

Note. *g* = general structure coefficients based on first unrotated factor coefficients (*g* loadings), *h*² = Communality. Factor pattern coefficients (structure coefficients) based on principal factors extraction with promax rotation (*k* = 4). Salient pattern coefficients presented in bold (pattern coefficient ≥ .30).

Table A2
Differential Ability Scales, Second Edition (DAS-II) Exploratory Factor Analysis: Five Oblique Factor Solution for the Standardization Sample 5 to 8 Year Olds (N = 787)

DAS-II Subtest	<i>g</i>	F1: Gv/Gf	F2: Gc	F3: Gf	F4: Glr	F5: Gwm	<i>h</i> ²
Recall of Designs (Gv)	.70	.89 (.80)	.03 (.51)	-.13 (.55)	-.02 (.34)	-.00 (.54)	.649
Copying (Gv)	.63	.74 (.72)	-.09 (.43)	-.03 (.52)	-.01 (.31)	.08 (.52)	.518
Pattern Construction-Alternative (Gv)	.73	.47 (.72)	.14 (.60)	.31 (.70)	-.08 (.29)	-.04 (.57)	.588
Speed of Information Processing (Gs)	.43	.46 (.46)	.03 (.32)	-.08 (.33)	.08 (.27)	.02 (.34)	.222
Rapid Naming (Gs)	.49	.45 (.51)	.03 (.37)	-.03 (.39)	.10 (.32)	.03 (.39)	.271
Recognition of Pictures (Gv)	.57	.42 (.58)	-.01 (.42)	.26 (.52)	.16 (.37)	-.15 (.40)	.372
Matching Letter-Like Form (Gv)	.63	.41 (.63)	-.10 (.45)	.23 (.58)	.01 (.31)	.16 (.55)	.440
Early Number Concepts (Gc/Gf)	.69	.33(.66)	.04 (.55)	.30 (.65)	-.03 (.31)	.13 (.59)	.500
Picture Similarities (Gf)	.54	.32 (.51)	.28 (.50)	.10 (.48)	-.03 (.24)	-.08 (.40)	.313
Naming Vocabulary (Gc)	.66	.12 (.52)	.78 (.75)	-.14 (.51)	-.02 (.35)	.01 (.52)	.575
Word Definitions (Gc)	.64	-.19 (.43)	.75 (.75)	.12 (.55)	.06 (.38)	.02 (.52)	.581
Verbal Similarities (Gc)	.70	.20 (.54)	.68 (.77)	.06 (.59)	.01 (.38)	.05 (.57)	.591
Verbal Comprehension (Gc)	.65	.12 (.54)	.50 (.67)	.11 (.57)	-.02 (.32)	.04 (.53)	.469
Matrices (Gf)	.65	-.09 (.53)	.03 (.55)	.77 (.75)	.05 (.32)	.00 (.53)	.560
Sequential and Quantitative Reasoning (Gf)	.75	.14 (.67)	.09 (.62)	.69 (.82)	-.10 (.27)	-.01 (.60)	.682
Recall of Objects-Immediate (Glr)	.55	.04 (.43)	.07 (.46)	.04 (.39)	.81 (.85)	-.06 (.43)	.724
Recall of Objects-Delayed (Glr)	.47	.06 (.38)	-.04 (.36)	-.05 (.30)	.77 (.79)	.07 (.40)	.620
Digits Backward (Gwm)	.70	.09 (.61)	-.06 (.55)	.20 (.64)	.01 (.37)	.58 (.75)	.585
Digits Forward (Gwm)	.62	.10 (.53)	.27 (.58)	-.18 (.48)	-.03 (.34)	.55 (.67)	.491
Recall of Sequential Order (Gwm)	.73	-.03 (.59)	.17 (.65)	.20 (.66)	.09 (.45)	.45 (.73)	.593
Eigenvalue		8.47	1.31	1.23	.892	.775	
% Variance		42.4	6.5	6.1	4.5	3.9	
<u>Factor Correlations</u>							
F1		1.000					
F2		.656	1.000				
F3		.751	.716	1.000			
F4		.442	.464	.385	1.000		
F5		.704	.692	.716	.474	1.000	

Note. *g* = general structure coefficients based on first unrotated factor coefficients (*g* loadings), *h*² = Communality. Factor pattern coefficients (structure coefficients) based on principal factors extraction with promax rotation (*k* = 4). Salient pattern coefficients presented in bold (pattern coefficient $\geq .30$).

Table A3

Sources of Variance in the DAS-II for the Standardization Sample5 to 8 Year Olds (N = 787) According to a SL Orthogonalization Model with Three First-Order Factors

DAS-II Subtest	General		F1: ?		F2: ?		F3: Glr		h ²	u ²
	b	S ²	b	S ²	b	S ²	b	S ²		
Recall of Designs (Gv)	.66	.43	.38	.14	-.05	.00	.02	.00	.579	.421
Copying (Gv)	.60	.36	.37	.14	-.08	.01	.02	.00	.501	.499
Matching Letter Like Form (Gv)	.59	.35	.30	.09	.01	.00	.01	.00	.439	.561
Pattern Construction-Alternative (Gv)	.69	.48	.29	.09	.11	.01	-.09	.01	.581	.419
Early Number Concepts (Gc/Gf)	.65	.42	.26	.07	.11	.01	-.04	.00	.500	.500
Recognition of Pictures (Gv)	.53	.28	.24	.06	.00	.00	.10	.01	.352	.648
Sequential and Quantitative Reasoning (Gf)	.70	.49	.24	.06	.20	.04	-.14	.02	.603	.397
Rapid Naming (Gs)	.46	.21	.22	.05	-.01	.00	.11	.01	.267	.733
Speed of Information Processing (Gs)	.40	.16	.20	.04	-.02	.00	.09	.01	.212	.788
Digits Backward (Gwm)	.65	.42	.20	.04	.15	.02	.04	.00	.483	.517
Picture Similarities (Gf)	.51	.26	.15	.02	.14	.02	-.03	.00	.300	.700
Word Definitions (Gc)	.58	.34	-.11	.01	.48	.23	.04	.00	.582	.418
Verbal Similarities (Gc)	.65	.42	-.01	.00	.41	.17	.02	.00	.582	.418
Naming Vocabulary (Gc)	.60	.36	-.01	.00	.38	.14	.02	.00	.507	.493
Verbal Comprehension (Gc)	.61	.37	.06	.00	.31	.09	-.01	.00	.466	.534
Recall of Sequential Order (Gwm)	.68	.46	.12	.01	.25	.06	.09	.01	.539	.461
Digits Forward (Gwm)	.57	.31	.01	.01	.23	.05	.05	.00	.392	.608
Matrices (Gf)	.60	.36	.16	.02	.20	.04	-.04	.00	.428	.572
Recall of Objects-Delayed (Glr)	.43	.19	.03	.00	-.01	.00	.68	.46	.646	.354
Recall of Objects-Immediate (Glr)	.50	.25	.02	.00	.05	.00	.65	.43	.683	.317
Explained Common Variance (ECV)		.719		.088		.093		.100	.482	.482
Explained Total Variance (ETV)		.346		.042		.045		.048		
ω_H / ω_{HS}		.842		.145		.186		.534		

Note. b = factor loading, S^2 = variance explained, h^2 = communality, u^2 = uniqueness, ω_H = Omega hierarchical (g), ω_{HS} = Omega hierarchical subscale (group factors).

Table A4

Sources of Variance in the DAS-II for the Standardization Sample 5 to 8 Year Olds (N=787) According to a SL Orthogonalization Model with Five First-Order Factors

DAS-II Subtest	General		Gv/Gs		Gc		Gf		Glr		Gwm		h^2	u^2
	b	S^2	b	S^2	b	S^2	b	S^2	b	S^2	b	S^2		
Recall of Designs (Gv)	.66	.43	.46	.21	.02	.00	-.07	.01	-.01	.00	-.00	.00	.654	.346
Copying (Gv)	.57	.33	.39	.15	-.05	.00	-.02	.00	-.01	.00	.07	.01	.481	.519
Pattern Construction-Alternative (Gv)	.69	.47	.24	.06	.08	.01	.17	.03	-.05	.00	-.04	.00	.568	.432
Speed of Information Processing (Gs)	.42	.18	.24	.06	.02	.00	-.04	.00	.05	.00	.01	.00	.238	.762
Rapid Naming (Gs)	.48	.23	.24	.06	.01	.00	-.02	.00	.06	.00	.02	.00	.291	.709
Recognition of Pictures (Gv)	.62	.39	.22	.05	-.00	.00	.14	.02	.09	.01	-.13	.02	.481	.519
Matching Letter-Like Form (Gv)	.55	.30	.21	.05	-.05	.00	.12	.02	.01	.00	.13	.02	.386	.614
Early Number Concepts (Gc/Gf)	.61	.37	.17	.03	.02	.00	.16	.03	-.02	.00	.11	.01	.439	.561
Picture Similarities (Gf)	.53	.28	.17	.03	.15	.02	.06	.00	-.02	.00	-.07	.00	.339	.661
Naming Vocabulary (Gc)	.63	.40	.06	.00	.41	.17	-.08	.01	-.01	.00	.01	.00	.582	.418
Word Definitions (Gc)	.63	.40	-.10	.01	.40	.16	.07	.00	.03	.00	.02	.00	.575	.425
Verbal Similarities (Gc)	.67	.45	.01	.00	.36	.13	.03	.00	.01	.00	.04	.00	.578	.422
Verbal Comprehension (Gc)	.61	.38	.06	.00	.26	.07	.06	.00	-.01	.00	.03	.00	.455	.545
Matrices (Gf)	.64	.40	-.05	.00	.02	.00	.42	.18	.03	.00	.00	.00	.585	.415
Sequential and Quantitative Reasoning (Gf)	.69	.47	.07	.01	.05	.00	.38	.14	-.06	.00	-.01	.000	.626	.374
Recall of Objects-Immediate (Glr)	.76	.58	.02	.00	.04	.00	.02	.00	.46	.21	-.05	.00	.793	.207
Recall of Objects-Delayed (Glr)	.64	.40	.03	.00	-.02	.00	-.03	.00	.44	.19	.06	.00	.601	.399
Digits Backward (Gwm)	.51	.26	.05	.00	-.03	.00	.11	.01	.01	.00	.49	.24	.510	.490
Digits Forward (Gwm)	.44	.19	.05	.00	.15	.02	-.10	.01	-.02	.00	.47	.22	.446	.554
Recall of Sequential Order (Gwm)	.60	.36	-.01	.00	.09	.01	.11	.01	.05	.00	.39	.15	.526	.474
Explained Common Variance (ECV)		.715		.070		.059		.046		.042		.067	.508	.492
Explained Total Variance (ETV)		.363		.036		.030		.023		.022		.034		
ω_H/ω_{HS}		.872		.146		.198		.200		.240		.314		

Note. b = factor loading, S^2 = variance explained, h^2 = communality, u^2 = uniqueness, ω_H = Omega hierarchical (g), ω_{HS} = Omega hierarchical subscale (group factors).