Online Supporting Materials

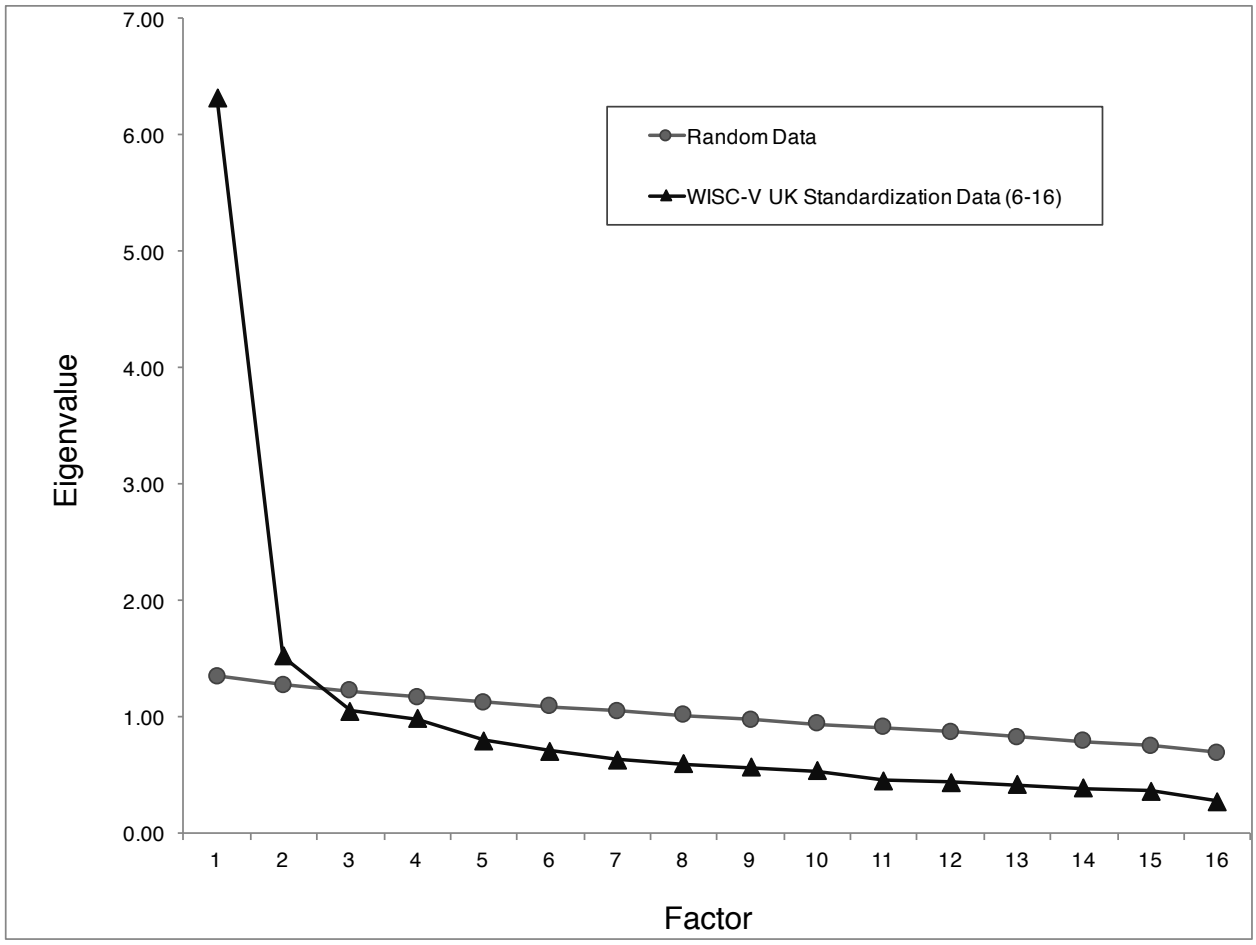

Figure A1. Scree plots for Horn's parallel analysis for WISC–V^{UK} standardization sample ($N = 415$).

Table A1

Wechsler Intelligence Scale for Children-Fifth UK Edition (WISC–V^{UK}) Exploratory Factor Analysis: Five Oblique Factor Solution for the Total Standardization Sample (N = 415)

	General	Verbal Comprehension		Working Memory		Perceptual Reasoning		Processing Speed		Factor 5: Inadequate		
WISC–V^{UK} Subtest	*S*	*P*	*S*	*P*	*S*	*P*	*S*	*P*	*S*	*P*	*S*	h^2
SI	.714	**.747**	.781	.002	.549	-.052	.536	.041	.337	.099	.475	.617
VC	.767	**.845**	.860	.028	.590	-.036	.578	-.015	.322	.050	.480	.741
	.755		.779	.080	.602	.201	.640	.038	.381	-.076	.432	.638
IN		**.616**										
CO	.590	**.828**	.722	-.025	.433	-.056	.426	-.014	.224	-.089	.290	.534
BD	.660	.075	.540	.044	.529	**.604**	.716	.038	.384	.024	.479	.523
VP	.608	-.067	.468	-.051	.455	**.873**	.768	-.016	.328	-.030	.443	.598
MR	.679	-.007	.497	-.037	.541	.019	.603	-.017	.348	**.998**	.978	.958
FW	.571	.222	.520	.079	.462	**.328**	.557	-.049	.265	.079	.427	.355
PC	.471	.051	.378	.165	.422	.220	.444	.013	.277	.120	.384	.236
AR	.649	.181	.550	**.473**	.655	.058	.510	.048	.413	-.009	.415	.455
DS	.660	.019	.511	**.778**	.754	-.048	.483	-.061	.393	.052	.461	.573
PSpan	.502	-.047	.365	**.341**	.506	.226	.457	.083	.368	-.002	.344	.289
LN	.630	.020	.495	**.842**	.745	-.017	.459	-.082	.370	-.089	.369	.567
CD	.449	-.150	.224	.143	.461	.005	.339	**.688**	.727	.030	.299	.543
SS	.530	.037	.348	.172	.526	-.089	.368	**.650**	.730	.020	.332	.552
CA	.271	.114	.181	-.283	.179	.053	.219	**.664**	.547	-.057	.125	.338
Eigenvalue		6.32		1.52		1.05		0.98		0.80		
% Variance		36.82		6.51		4.27		3.13		2.49		

Factor Correlations	VC	WM	PR	PS	F5
Verbal Comprehension (VC)	–				
Working Memory (WM)	.669	–			
Visual Spatial (PR)	.677	.661	–		
Processing Speed (PS)	.377	.578	.469	–	
Factor 5	.524	.581	.623	.381	–

Note. WISC–V^{UK} Subtests: SI = Similarities, VC = Vocabulary, IN = Information, CO = Comprehension, BD = Block Design, VP = Visual Puzzles, MR = Matrix Reasoning, FW = Figure Weights, PC = Picture Concepts, AR = Arithmetic, DS = Digit Span, PS = Picture Span, LN = Letter–Number Sequencing, CD = Coding, SS = Symbol Search, CA = Cancellation. *S* = Structure Coefficient, *P* = Pattern Coefficient, h^2 = Communality. General structure coefficients are based on the first unrotated factor coefficients (*g* loadings). Salient factor pattern coefficients (≥ .30) presented in bold. Picture Concepts had no salient factor pattern coefficients.

Table A2

Wechsler Intelligence Scale for Children-Fifth UK Edition (WISC–V^{UK}) Exploratory Factor Analysis: Two and Three Oblique Factor Solutions for the Total Standardization Sample (N = 415)

	Two Oblique Factors				Three Oblique Factors				
WISC–V^{UK} Subtest	g^1	F1: *g*	F2: PS	h^2	g^1	F1: PR & WM	F2: VC	F3: PS	h^2
SI	.715	**.803** (.747)	-.103 (.332)	.566	.718	.085 (.618)	**.707** (.776)	.015 (.359)	.606
VC	.767	**.903** (.811)	-.170 (.320)	.678	.773	.067 (.658)	**.821** (.858)	-.032 (.350)	.738
IN	.760	**.807** (.783)	-.046 (.392)	.614	.759	.221 (.680)	**.601** (.774)	.021 (.403)	.624
CO	.587	**.743** (.633)	-.203 (.200)	.430	.596	-.149 (.468)	**.843** (.726)	-.016 (.244)	.538
BD	.655	**.567** (.644)	.141 (.449)	.429	.659	**.713** (.693)	.015 (.524)	-.051 (.383)	.483
VP	.587	**.515** (.579)	.118 (.397)	.345	.594	**.763** (.647)	-.070 (.452)	-.107 (.321)	.427
MR	.618	**.528** (.606)	.145 (.431)	.382	.623	**.716** (.664)	-.025 (.484)	-.056 (.363)	.443
FW	.574	**.582** (.585)	.005 (.321)	.342	.574	**.523** (.582)	.165 (.509)	-.106 (.276)	.359
PC	.474	**.394** (.462)	.126 (.340)	.225	.475	**.510** (.500)	-.003 (.371)	-.014 (.291)	.250
AR	.653	**.520** (.631)	.206 (.488)	.429	.651	**.374** (.626)	.217 (.558)	.151 (.465)	.426
DS	.650	**.494** (.623)	.237 (.505)	.427	.648	**.489** (.646)	.109 (.525)	.126 (.465)	.432
PSpan	.505	**.325** (.470)	.267 (.444)	.271	.505	**.484** (.526)	-.047 (.366)	.127 (.398)	.288
LN	.618	**.474** (.593)	.219 (.477)	.386	.615	**.418** (.605)	.143 (.509)	.135 (.445)	.385
CD	.454	-.102 (.329)	**.794** (.739)	.554	.453	.086 (.426)	-.144 (.229)	**.746** (.738)	.554
SS	.532	.061 (.428)	**.677** (.710)	.506	.535	-.002 (.477)	.055 (.356)	**.731** (.752)	.569
CA	.268	-.055 (.196)	**.462** (.432)	.189	.270	-.158 (.215)	.065 (.173)	**.542** (.474)	.234
Eigenvalue		6.32	1.52			6.32	1.52	1.05	
% Variance		36.11	6.21			36.34	6.45	3.18	
Factor Correlations		F1	F2			F1	F2	F3	
Factor 1 (F1)		–			Factor 1 (F1)	–			
Factor 2 (F2)		.543	–		Factor 2 (F2)	.743	–		
					Factor 3 (F3)	.600	.415	–	

Note. WISC–V^{UK} Subtest: SI = Similarities, VC = Vocabulary, IN = Information, CO = Comprehension, BD = Block Design, VP = Visual Puzzles, MR = Matrix Reasoning, FW = Figure Weights, PC = Picture Concepts, AR = Arithmetic, DS = Digit Span, PSpan = Picture Span, LN = Letter–Number Sequencing, CD = Coding, SS = Symbol Search, CA = Cancellation, *g* = general intelligence, PS = Processing Speed, PR = Perceptual Reasoning, WM = Working Memory, VC = Verbal Comprehension, h^2 = Communality. [1]General structure coefficients based on first unrotated factor coefficients (*g* loadings). Factor pattern coefficients (structure coefficients) based on principal factors extraction with promax rotation ($k = 4$). Salient factor pattern coefficients (≥ .30) presented in bold.

Table A3

Sources of Variance in the Wechsler Intelligence Scale for Children-Fifth UK Edition (WISC–V^UK) for the Total Standardization Sample (N = 415) According to an Exploratory SL Bifactor Model (Orthogonalized Higher-Order Factor Model) with Five First–Order Factors

WISC–V^UK	General		VC		WM		PR		PS		Factor 5			
Subtest	*b*	S^2	*b*	S^2	*b*	S^2	*b*	S^2	*b*	S^2	*b*	S^2	h^2	u^2
SI	.622	.387	**.481**	**.231**	.001	.000	-.028	.001	.034	.001	.071	.005	.625	.375
VC	.667	.445	**.544**	**.296**	.014	.000	-.020	.000	-.012	.000	.036	.001	.743	.257
IN	.677	.458	**.397**	**.158**	.041	.002	.110	.012	.031	.001	-.054	.003	.634	.366
CO	.495	.245	**.533**	**.284**	-.013	.000	-.031	.001	-.011	.000	-.064	.004	.534	.466
BD	.639	.408	.048	.002	.023	.001	**.331**	**.110**	.031	.001	.017	.000	.522	.478
VP	.606	.367	-.043	.002	-.026	.001	**.478**	**.228**	-.013	.000	-.022	.000	.599	.401
MR	.665	.442	-.005	.000	-.019	.000	.010	.000	-.014	.000	**.716**	**.513**	.956	.044
FW	.539	.291	.143	.020	.041	.002	**.179**	**.032**	-.040	.002	.057	.003	.350	.650
PC	.456	.208	.033	.001	.085	.007	**.120**	**.014**	.011	.000	.086	.007	.238	.762
AR	.614	.377	.117	.014	**.244**	**.060**	.032	.001	.039	.002	-.006	.000	.453	.547
DS	.642	.412	.012	.000	**.401**	**.161**	-.026	.001	-.050	.003	.037	.001	.578	.422
PSpan	.492	.242	-.030	.001	**.176**	**.031**	.124	.015	.068	.005	-.001	.000	.294	.706
LN	.613	.376	.013	.000	**.434**	**.188**	-.009	.000	-.067	.004	-.064	.004	.573	.427
CD	.428	.183	-.097	.009	.074	.005	.003	.000	**.563**	**.317**	.022	.000	.516	.484
SS	.489	.239	.024	.001	.089	.008	-.049	.002	**.532**	**.283**	.014	.000	.533	.467
CA	.231	.053	.073	.005	-.146	.021	.029	.001	**.543**	**.295**	-.041	.002	.377	.623
Total S^2		.321		.064		.030		.026		.057		.034	.533	.467
Common S^2		.602		.120		.057		.049		.107		.064		

Note. WISC–V^UK Subtest: SI = Similarities, VC = Vocabulary, IN = Information, CO = Comprehension, BD = Block Design, VP = Visual Puzzles, MR = Matrix Reasoning, FW = Figure Weights, PC = Picture Concepts, AR = Arithmetic, DS = Digit Span, PSpan = Picture Span, LN = Letter–Number Sequencing, CD = Coding, SS = Symbol Search, CA = Cancellation. WISC–V Factors: VC = Verbal Comprehension, WM = Working Memory, VS = Visual Spatial, PS = Processing Speed, FR = Fluid Reasoning. *b* = loading of subtest on factor, S^2 = variance explained, h^2 = communality, u^2 = uniqueness (specificity plus error). Bold type indicates coefficients and variance estimates consistent with the theoretically proposed factor. Italic type indicates coefficients and variance estimates associated with an alternate factor (where cross-loading *b* was larger than for the theoretically assigned factor). Given the inadequacy of a five-factor solution Omega coefficients were not estimated for the five-factor model.

Table A4

Sources of Variance in the WISC–V^{UK} 16 Subtests for the Total Standardization Sample (N = 415) According to CFA Higher-Order Model 4a

	General		Verbal Comprehension		Perceptual Reasoning		Working Memory		Processing Speed				
WISC–V^{UK} Subtest	*b*	S^2	*b*	S^2	*b*	S^2	*b*	S^2	*b*	S^2	h^2	u^2	*ECV*
Similarities	.657	.432	.421	.177							.609	.391	.709
Vocabulary	.720	.518	.463	.214							.733	.267	.707
Information	.670	.449	.431	.186							.635	.365	.707
Comprehension	.582	.339	.375	.141							.479	.521	.707
Block Design	.652	.425			.314	.099					.524	.476	.812
Visual Puzzles	.597	.356			.288	.083					.439	.561	.811
Matrix Reasoning	.605	.366			.291	.085					.451	.549	.812
Figure Weights	.548	.300			.264	.070					.370	.630	.812
Picture Concepts	.450	.203			.216	.047					.249	.751	.813
Arithmetic	.629	.396					.301	.091			.486	.514	.814
Digit Span	.661	.437					.316	.100			.537	.463	.814
Picture Span	.479	.229					.229	.052			.282	.718	.814
Letter–Number Sequencing	.632	.399					.302	.091			.491	.509	.814
Coding	.415	.172							.562	.316	.488	.512	.353
Symbol Search	.468	.219							.633	.401	.620	.380	.353
Cancellation	.285	.081							.386	.149	.230	.770	.353
Total Variance		.333		.051		.027		.026		.056	.493	.507	
ECV		.675		.103		.055		.052		.115			
ω		.915		.863		.772		.763		.699			
ω_H / ω_{HS}		.828		.277		.124		.143		.480			

Note. *b* = standardized loading of subtest on factor, S^2 = variance explained, h^2 = communality, u^2 = uniqueness, ECV = explained common variance, ω= Omega, ω_H= Omega-hierarchical (general factor), ω_{HS}= Omega-hierarchical subscale (group factors), H = index of construct reliability, PUC = percentage of uncontaminated correlations.

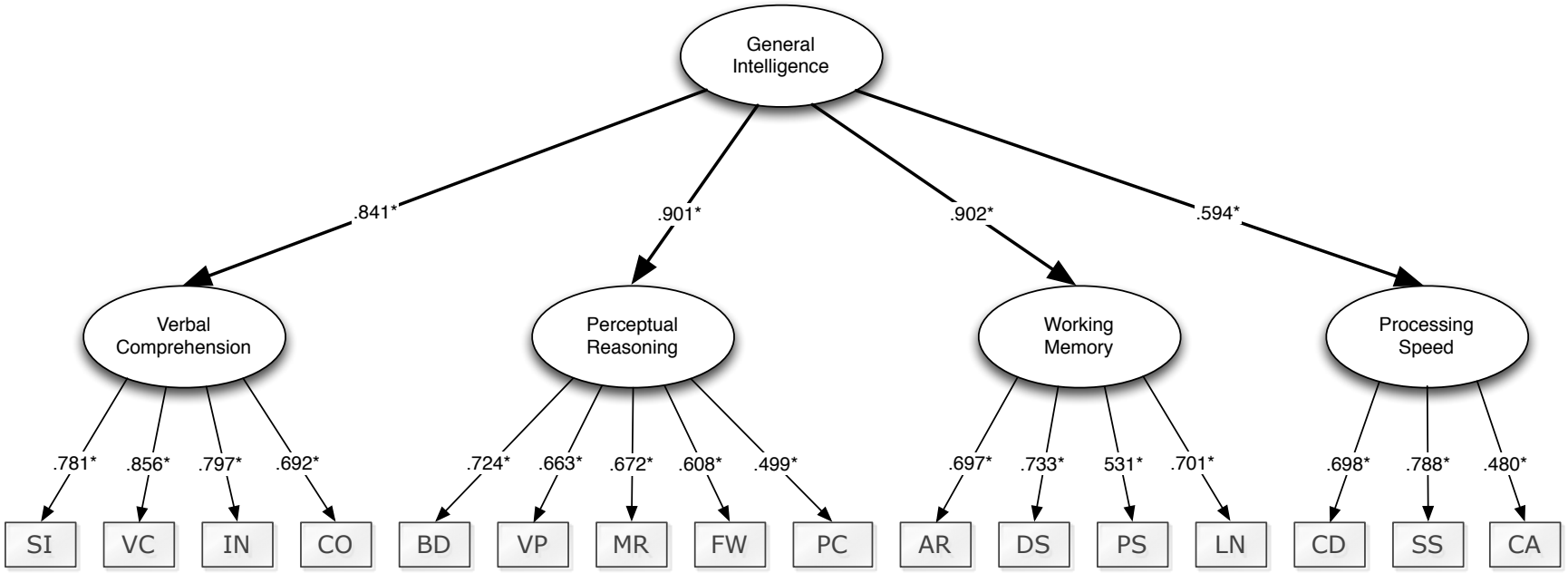

Figure A2. Higher-order measurement model (4a), with standardized coefficients, for WISC–V^{UK} standardization sample (N = 415) 16 Subtests. SI = Similarities, VC = Vocabulary, IN = Information, CO = Comprehension, BD = Block Design, VP = Visual Puzzles, MR = Matrix Reasoning, FW = Figure Weights, PC = Picture Concepts, AR = Arithmetic, DS = Digit Span, PS = Picture Span, LN = Letter–Number Sequencing, CD = Coding, SS = Symbol Search, CA = Cancellation. *p < .05.