CELF® 4
Clinical Evaluation of Language Fundamentals
FOURTH EDITION

Technical Report

Correlations Between the CELF–4 and WISC–4 Integrated

Children who participated in research studies with the *Wechsler Intelligence Scales for Children–Fourth Edition Integrated* (Wechsler, Kaplan, Fein, Kramer, Morris, Delis, & Maerlender; 2004) were administered the *Clinical Evaluation of Language Fundamentals–Fourth Edition* (Semel, Wiig, & Secord; 2003). The WISC–IV Integrated is an individually administered clinical instrument designed for use in the assessment of cognitive abilities and problem-solving processes.

The study was done to look at the correlations between working memory and language processing indexes in both tests. The study was conducted with 55 children ages 6:0 to 16:11 who had been diagnosed with language disorders. Most children were administered the WISC–IV Integrated first, with a testing interval of 0–42 days and a mean interval of 8 days.

The following table presents the means, standard deviations, and correlation coefficients for this study. The data reported includes correlations between the CELF–4 Core composite scores and WISC–IV Integrated subtests, scaled process scores, and composite scores most relevant for children with language disorders.

As expected, the highest correlation (.69) between the CELF–4 Core Language score and the WISC–IV Integrated composite scores was obtained for the Verbal Comprehension Index (VCI). With the exception of the CELF–4 Working Memory index (WMI), correlations between the CELF–4 index scores and VCI were high, ranging from .54 (CELF–4 Receptive Language index [RLI] and WISC–IV Integrated VCI) to .71 (CELF–4 Language Content index [LCI] and WISC–IV Integrated VCI).

All correlations between the CELF–4 Core Language Score and WISC–IV Integrated scaled process scores in the Verbal domain were high, ranging from .51 (CELF–4 RLI and WISC–IV Integrated WMI) to .69 (CELF–4 WMI and WISC–IV Integrated WMI).

Correlations and Descriptive Statistics for the WISC–IV Integrated /CELF–4 Validity Study with the Language Disorders Groups

Subtest/ Process Score Composite	CELF–4 Core Score Core Language	CELF–4 Index Scores Receptive Language	Expressive Language	Language Content	Language Structure	Language Memory	Working Memory	WISC–IV Integrated Mean	SD	N
BD	.17	.30	.11	.29	.16	.10	.26	8.8	2.8	55
SI	.53	.41	.50	.54	.43	.47	.36	7.0	1.9	55
DS	.48	.36	.45	.35	.54	.33	.58	7.3	2.8	53
PCn	.36	.48	.28	.39	.35	.33	.32	8.0	2.9	55
CD	.21	.29	.14	.19	.21	.30	.24	6.5	2.3	55
VC	.61	.51	.56	.68	.46	.56	.29	6.8	2.5	55
LN	.53	.43	.51	.48	.24	.61	.48	7.4	3.0	53
MR	.40	.40	.34	.32	−.04	.56	.31	7.9	2.7	54
CO	.60	.46	.60	.57	.45	.67	.24	6.5	2.4	55
SS	.23	.21	.19	.21	.30	.14	.15	7.6	2.7	55
PCm	.12	.21	.04	.18	−.32	.28	.04	8.6	2.7	55
CA	.32	.38	.27	.30	.03	.47	.13	8.9	2.5	55
IN	.57	.51	.48	.60	.38	.57	.27	6.9	2.2	55
AR	.53	.42	.46	.49	.38	.53	.36	6.7	2.2	51
WR	.64	.58	.58	.62	.44	.75	.37	7.3	2.1	55
SIMC	.09	.11	.06	.15	−.22	.46	.16	6.7	2.7	55
VCMC	.59	.63	.51	.66	.45	.63	.26	6.6	2.7	55
PVMC	.40	.48	.37	.45	.26	.47	.04	7.1	2.6	55
COMC	.43	.45	.35	.42	.42	.40	.50	6.5	2.9	55
INMC	.48	.45	.41	.49	.24	.58	.31	6.6	2.7	55
BDN	.15	.27	.07	.24	.13	.09	.27	8.9	2.9	55
BDMC	.23	.24	.17	.26	.33	.14	.13	8.2	3.0	55
BDMCN	.20	.16	.12	.18	.21	.11	.18	8.5	3.2	55
EM	.01	.18	−.03	.16	−.50	.11	.14	8.5	3.3	39
EMN	−.05	.18	−.09	.17	−.55	.07	.16	8.4	3.5	39
DSF	.39	.26	.39	.30	.47	.38	.47	7.3	2.8	52
DSB	.42	.33	.39	.31	.47	.18	.48	8.2	3.0	54
VDS	.22	.11	.18	.20	−.09	.53	.33	7.5	3.5	55
SSpF	.40	.44	.39	.35	.29	.50	.32	8.8	2.9	55
SSpB	.28	.30	.23	.31	.10	.44	.22	8.1	3.1	55
LSN	.33	.27	.34	.22	.35	.36	.51	7.1	2.8	55
LSR	.32	.28	.29	.29	.48	.04	.43	7.8	2.9	55
LNPA	.46	.31	.41	.29	−.18	.50	.52	7.1	2.3	39
ART	.51	.45	.44	.45	.50	.45	.38	6.2	2.6	51
ARPA-A	.64	.59	.58	.54	.50	.67	.50	6.6	2.5	54
ARPA-AT	.68	.57	.61	.55	.54	.70	.45	6.2	2.7	54
ARPA-B	.64	.61	.57	.59	.48	.71	.47	6.2	2.8	54
WA	.62	.58	.54	.52	.42	.75	.41	6.5	2.9	55
CAR	.18	.23	.15	.16	−.09	.37	.03	9.1	2.2	55
CAS	.37	.46	.32	.35	.16	.47	.23	8.8	2.5	55
CDC	−.02	.04	−.11	−.11	−.68	.20	−.01	6.3	2.8	39
VCI	.69	.54	.66	.71	.57	.65	.35	81.1	10.9	55
PRI	.38	.49	.29	.42	.20	.41	.37	89.0	13.8	54
WMI	.64	.51	.60	.54	.57	.59	.69	84.6	11.7	51
PSI	.25	.28	.19	.23	.30	.23	.21	83.5	12.6	55
FSIQ	.59	.58	.50	.60	.45	.60	.49	79.9	11.1	50
CELF–4										
Mean	69.1	74.7	68.9	72	71	70.6	77.9			
SD	17.8	16.3	16.1	14.2	17.1	17.4	13.1			
N	54	54	55	55	24	30	55			

Note. WISC–IV Integrated abbreviations are: BD = Block Design, SI = Similarities, DS = Digit Span, PCn = Picture Concepts, CD = Coding, VC = Vocabulary, LN = Letter-Number Sequencing, MR = Matrix Reasoning, CO = Comprehension, SS = Symbol Search, PCM = Picture Completion, CA = Cancellation, IN = Information, AR = Arithmetic, WR = Word Reasoning, SIMC = Similarities Multiple Choice, VCMC = Vocabulary Multiple Choice, PVMC = Picture Vocabulary Multiple Choice, COMC = Comprehension Multiple Choice, INMC = Information Multiple Choice, BDN = Block Design No Time Bonus, BDMC = Block Design Multiple Choice, BDMCN = Block Design Multiple Choice No Time Bonus, EM = Elithorn Mazes, EMN = Elithorn Mazes No Time Bonus, DSF = Digit Span Forward, DSB = Digit Span Backward, LSN = Letter Span Nonrhyming, LSR = Letter Span Rhyming, LNPA = Letter-Number Sequencing Process Approach, ART = Arithmetic With Time Bonus, ARPA-A = Arithmetic Process Approach-Part A, ARPA-AT = Arithmetic Process Approach-Part A With Time Bonus, ARPA-B = Arithmetic With Time Bonus, WA = Written Arithmetic, CAR = Cancellation Random, CAS = Cancellation Structured, CDC = Coding Copy, VCI = Verbal Comprehension Index, PRI = Perceptual Reasoning Index, WMI = Working Memory Index, PSI = Processing Speed Index, FSIQ = Full Scale IQ

Correlations between the CELF–4 Core Language Score and WISC–IV Integrated scaled process scores in the Verbal domain were moderate to high with the exception of Similarities Multiple Choice (SIMC). The majority of correlations between the CELF–4 index scores and the WISC–IV Integrated Verbal domain scaled process scores were moderate to high with the exception of the CELF–4 WMI score and the WISC–IV Integrated SIMC score. The majority of correlations between the CELF–4 composite scores and the scaled process scores in the WISC–IV Integrated Working Memory domain were moderate to high. The data presented were consistent with research suggesting that children with language disorders exhibit deficits in working memory (Botting & Conti-Ramsden, 2001; Cohen, 1997; Gilliam, Cowan, & Marler, 1998) and management of cognitive resources associated with language processing and working memory (Montgomery, 2000).

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