

아스퍼거장애와 비전형 자폐장애 아동의 KEDI-WISC와 BGT 수행의 비교*

COMPARISON OF KEDI-WISC AND BGT PERFORMANCE BETWEEN THE ASPERGER'S DISORDER AND PDD NOS CHILDREN

양 윤 란** · 신 민 섭***

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요 약 :

(13) (14) 27
K - WISC BGT

K - WISC BGT가 가 가

중심 단어 :

서 론

10 26

(Asperger's disorder)

(4 10)

1),

2),

가

3)4),

1997

(2 - 97 - 157)

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가 , , , 가 , Asperger¹⁹⁾가 4
 “ DSM - 가 20)
 ”(High function PDD) “ 가 50
 ”(atypical autism PDD NOS)
 . ,
 가 . Asperger¹⁹⁾
 DSM -
 5-8) . 9) 4)
 10)11) 가 ,
 . , 가
 Ozonoff¹⁵⁾ 10
 14 , 25
 (autistic spectrum) 가 가
 , 가 2 가 .
 가 12), 가 가
 가 가 13) 가 21)22)
 14)15), 16), 가
 (theory of mind) 17)
 , Ozonoff¹⁵⁾ 가 Ehlers²²⁾
 가
 가 18)
 가 Cattel²³⁾ “ ”

“ ” 가
 ICD - 10 가 가
 가 Szatmari ¹⁴⁾ - (Bender Gestalt test : BGT)
 Ozonoff ¹⁵⁾ 가
 가 WISC BGT가

연구 방법

. Asperger

1. 연구대상
 1994 98 7

DSM -

가 ²⁴⁾²⁵⁾ 가
¹⁴⁾ 가 ²¹⁾ 가 가
 가 5 , 15 (KEDI - WISC) 70
 (N=13 ; 12 , 1)
 7.27 (=1.90)
 (N=14 ; 13 , 1) 8.12
 (=1.96)
 가

2. 연구도구

1) 아동용 지능검사(KEDI-WISC)²⁶⁾

가 가 11 , , 11 가
 가

2) BGT(Bender Gestalt Test)

BGT Bender²⁷⁾가

- 가

28)

(ANCOVA)

Koppitz²⁹⁾

BGT

결 과

3. 연구방법 및 절차

1. 두 집단간 인지기능의 비교

가

(AS)

(PDD NOS)

가

t -

(Table 1).

4. 자료분석

14.72

BGT

($t_{25}=2.96, p<.01$).

22.11

t -

($t_{25}=3.79, p<.01$).

Table 1. Differential patterns of FSIQ, VIQ, PIQ, and verbal-performance IQ discrepancy for the AS and PDD NOS groups

	AS (n = 13)	PDD NOS (n = 14)	t
	M (SD)	M (SD)	
Full Scale IQ	100.07 (17.04)	85.35 (7.23)	2.96**
Verbal IQ (VIQ)	99.61 (16.95)	77.50 (13.25)	3.79**
Performance IQ (PIQ)	101.00 (15.72)	97.71 (12.06)	.61
VIQ-PIQ	- 1.38 (12.07)	- 20.21 (21.72)	2.75*

*p<.05, **p<.01

Table 2. WISC mean scaled scores for the AS and PDD NOS groups

	AS (n = 13)	PDD NOS (n = 14)	t	(FSIQ)
	M (SD)	M (SD)		
Information	12.23 (3.11)	7.14 (3.39)	2.45*	n.s.
Similarities	9.69 (3.72)	6.71 (2.78)	2.36*	n.s.
Arithmetic	10.46 (3.68)	7.14 (4.75)	2.01	n.s.
Vocabulary	10.69 (2.59)	6.78 (2.45)	4.02***	5.43*
Comprehension	7.69 (2.49)	4.50 (2.13)	3.57**	4.53*
Digit Span	11.53 (3.71)	9.57 (4.60)	1.21	n.s.
Picture Completion	10.15 (2.76)	8.21 (2.80)	1.80	n.s.
Picture Arrangement	7.46 (2.69)	6.85 (2.90)	.55	n.s.
Block Design	13.30 (4.69)	14.92 (3.24)	- 1.05	9.28**
Object Assembly	10.23 (3.05)	10.57 (4.32)	- .23	n.s.
Coding	9.46 (2.84)	7.57 (2.87)	1.71	n.s.

*p<.05, **p<.01, ***p<.001, n.s : not significant

3.29

가

(Fig. 1).

(ANCOVA)

가

($F_{1,25}=5.43, p<.05$)

($F_{1,25}=4.53, p<.05$)

t-

가 1.38

($F_{1,25}=9.28, p<.01$).

20.21

($t_{25}=2.75, p<.05$).

2. 두 집단간 시각-운동 협응능력의 비교

BGT

(Table 3).

BG

29)

가

WISC

가

(Table 2).

($t_{25}=2.45, p<.05$),

($t_{25}=2.36, p<.05$),

($t_{25}=4.02, p<.001$),

($F_{1,25}=5.13, p<.05$).

($t_{25}=3.57, p<.01$)

가

가

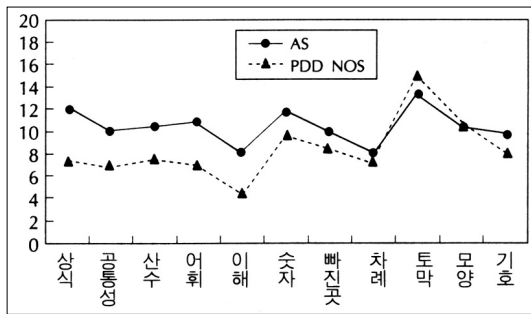


Fig. 1. K-WISC Profile in AS and PDD NOS groups.

Table 3. BG mean error scores and performance time for the AS and PDD NOS groups

	AS (n = 13)	PDD NOS (n = 14)	t	F(FSIQ)
	M (SD)	M (SD)		
BG error score	3.46 (3.68)	2.85 (3.41)	.44	5.13*
Performance time(min)	3.74 (1.69)	4.72 (1.55)	- 1.52	n.s

* $p<.05$, n.s : not significant

논 의

70

가

Klin²¹⁾ 가

Ozonoff¹⁵⁾ 가

Klin²¹⁾ Ehlers²²⁾ 가

Ehlers²²⁾ Gillberg & Gillberg¹⁾ 가

(motor clumsiness) (VIQ PIQ = 20.21)

DSM-4) 가

Ehlers²²⁾ 가

Ehlers²²⁾ K - WISC

32)

가 15)33)

Klin²¹⁾ ICD - 10

ICD - 10

DSM -

Wolff³⁰⁾ (schizoid disorder of childhood) ICD - 10

DSM -

Klin²¹⁾ 가

Klin²¹⁾ 16.11

7.27 가 WISC

가 Cattel²³⁾ 12)

가 34)35)

가

Klin²¹⁾ 가

- 10) **Wing L**(1988) : The continuum of autistic characteristics. In *Diagnosis and assessment in autism*, Schopler E, Mesibov GB (ed), Plenum Press, New York
- 11) **Wing L**(1991) : The relationship between Asperger's syndrome and Kanner's autism. In *Autism and Asperger syndrome*, Frith U(ed), Cambridge University Press, New York
- 12) **Szatmari P, Bartolucci G, Bremner R**(1989) : Asperger's syndrome and autism : Comparisons on early history and outcome. *Dev Med Child Neuro* 31 : 709-720
- 13) **Szatmari P, Archer L, Fisman A, Streiner DL, Wilson F**(1995) : Asperger's syndrome and autism : Differences in behavior, cognition, and adaptive functioning. *J Am Aca Child Adol Psychiatry* 34 : 1662-1671
- 14) **Szatmari P, Tuff L, Finlayson A, Bartolucci G** (1990) : Asperger's syndrome and autism : Neuro-cognitive aspects. *J Am Aca Child Adol Psychiatry* 29 : 130-136
- 15) **Ozonoff S, Rogers SJ, Pennington BF**(1991) : Asperger's syndrome : Evidence of an empirical distinction from high function autism. *J Child Psycho Psychiatry* 32 : 1107-1122
- 16) **Scott DW**(1985) : Asperger's syndrome and nonverbal communication : A pilot study. *Psycho Med* 15 : 683-687
- 17) **Baron-Cohen S, Jolliffe T, Mortimore C, Robertson M**(1997) : Another advanced test of theory of mind : Evidence from very high functioning adults with Autism or Asperger syndrome. *J Child Psycho Psychiatry* 38 : 813-822
- 18) **Gillberg C, Steffenburg S**(1987) : Outcome and prognostic factors in infantile autism and similar conditions : A population-based study of 46 cases followed through puberty. *J Autism Dev Disord* 15 : 389-398
- 19) **Asperger H**(1991/1944) : Autistic psychopathy in childhood. In *Autism and Asperger syndrome*, Frith U(ed), Cambridge University Press, London
- 20) **Miller JN, Ozonoff S**(1997) : Did Asperger's cases have Asperger disorder? Research note. *J Child Psycho Psychiatry* 38 : 247-251
- 21) **Klin A, Volkmar FR, Sparrow SS, Cicchetti DV, Rourke BP**(1995) : Validity and neuropsychological characterization of Asperger syndrome : Convergence with nonverbal learning disabilities syndrome. *J Child Psycho Psychiatry* 36 : 1127-1140
- 22) **Ehlers S, Nydn A, Gillberg C, Sandberg AD, Dahlgren SO, Hjelmqvist E, Odn A**(1997) : Asperger syndrome, Autism and Attention Disorders : A comparative study of the cognitive profiles of 120 children. *J Child Psycho Psychiatry* 38 : 207-217
- 23) **Cattell RB**(1971) : *Abilities : The structure, growth and action*. Houghton Mifflin, New York
- 24) **Ghaziuddin M, Tsai L, Ghaziuddin N**(1992) : Brief report : A reappraisal of clumsiness as a diagnostic feature of Asperger syndrome. *J Autism Dev Disord* 22 : 651-656
- 25) **Manjiviona J, Prior M**(1995) : Comparison of Asperger syndrome and high functioning autistic children on a test of motor impairment. *J Autism and Dev Disord* 25 : 23-39
- 26) 한국교육개발원 (1991) : KEDI-WISC(Korean Educational Development Institute-Wechsler Intelligence Scale for Children) 개인지능검사. 특수교육, 서울
- 27) **Bender L**(1946) : Bender motor gestalt test : Cards and manual of instructions. The American orthopsychiatry association
- 28) **Betler RW, McKintosh JR, Finch AJ, Williams LD** (1989) : The Bender-Gestalt as a method of personality assessment with adolescents. *J Clinical Psycho* 45 : 414-422
- 29) **Koppitz EM**(1964) : *The Bender Gestalt Test for young children*. Grune & Stratton, New York
- 30) **Wolff S**(1991) : 'Schizoid' personality in childhood and adult life I : The vagaries of diagnostic labelling. *Br J Psychiatry* 159 : 615-620
- 31) **Eaves LC, Ho HH, Eaves DM**(1994) : Subtypes of autism by cluster analysis. *J Autism Dev Disord* 24 : 3-22
- 32) 정연희, 홍강의 (1991) : K-WISC profile에 나타난 자폐아동과 주의력결핍장애 아동의 인지 특성 비교. *소아청소년 정신의학* 2 : 97-101
- 33) **Lincoln AJ, Courchesne E, Kilman BA, Elamasian R, Allen**(1988) : A study of intellectual abilities in high-functioning people with autism. *J Autism Dev Disord* 18 : 505-524
- 34) **Dean RS**(1990) : Manual-report of individual evaluation for use WAIS/WAISR. In *Assessing adolescent and adult intelligence*, Kaufman AS(ed), Allyn and Bacon, Boston
- 35) **Rapaport D, Gill MM, Schafer R**(1968) : *Diagnostic psychological testing*. International University Press, New York
- 36) **Bowler DM**(1992) : *Theory of mind in Asperger's*

- syndrome. *J Child Psycho Psychiatry* 33 : 877-893
- 37) **Horn JR** (1985) : Remodeling old models of intelligence. In *Handbook of intelligence*, Wolman BB (ed), Pergamon Press, New York
- 38) 이영식, 조인회 (1994) : Asperger씨 증후군 : 자폐증, 분열성 성격장애와의 연계성. *소아청소년정신의학* 5 : 41-53

ABSTRACT

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COMPARISON OF KEDI-WISC AND BGT PERFORMANCE BETWEEN THE ASPERGER'S DISORDER AND PDD NOS CHILDREN

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Objectives : This study was conducted to compare the cognitive characteristics and visual-motor coordination ability of children with Asperger's disorder and with those of children with PDD NOS.

Methods : 27 children (13 in AS group and 14 in PDD NOS group) were individually assessed using the K-WISC and BGT, and the results of those tests were analyzed.

Results : The mean FSIQ of the AS group was significantly higher than that of the PDD NOS group. There was also a large discrepancy between VIQ and PIQ in the PDD NOS, while there was not significant discrepancy in the AS. The AS was distinguished from PDD NOS group by significantly higher scores in Vocabulary and Comprehension subscales and lower score in Block design. Also, when compared with the PDD NOS, the AS showed more difficulties in visual-motor coordination.

Conclusion : The AS showed relatively good verbal and learning ability, while the PDD NOS relatively superior ability in visuospatial function and visual-motor coordination. The findings indicated that the K-WISC and BGT might be useful assessment tool to differentiate the AS from PDD NOS.

KEY WORDS : Asperger's disorder · PDD NOS · Cognitive function · Visual-motor coordination.